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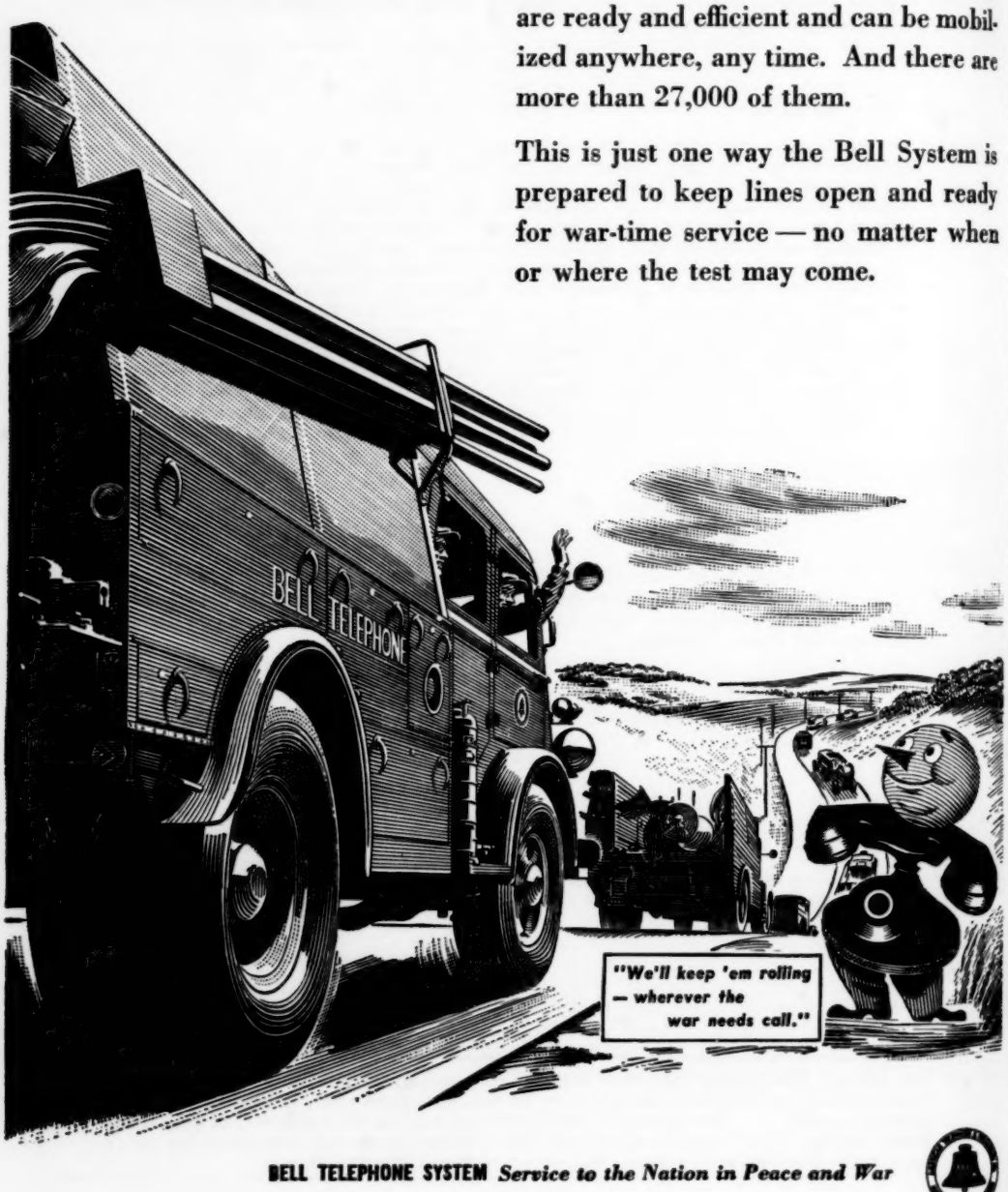

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The Journal of Higher Education MAY, 1942 II

College Programs of Self-Examination

By RALPH W. OGAN

An Enumeration of Desirable Outcomes and Characters

THE development of continuing programs of self-examination in many colleges evinces substantial concern toward doing a better educational job. Colleges generally seem to have healthful discontent with many of their activities. A bare list of the factors which contribute to such discontent includes changing social conditions; varying enrollment, actual and prospective; conflicting educational philosophies; the accumulation of research evidence regarding human growth and development; and the persistent criticism of education.

A few years ago surveys of colleges by outside surveyors marked the beginning of an era of intensified, general interest in improving undergraduate education. The emphasis shifted to institutional self-study; colleges began their own self-examination and banded themselves in co-operative groups to study their problems. Currently the American Council on Education is sponsoring two such studies, the Cooperative Study in General Education and the investigation of the Commission on Teacher Education. The North Central and the Southern Associations of Colleges and Secondary Schools, the American Association of Junior Colleges, and various other groups are facilitating the co-operation of colleges in self-examination.

Also symptomatic of new interests and insights into problems of undergraduate education are the large and increasing numbers of yearbooks, monographs, and magazine articles. The announcements of new plans, of new courses, and reorganizations add evidence that colleges have a substantial concern with self-improvement.

The significance of continuous self-examination lies in the questions

which it seeks to answer. In the Cooperative Study in General Education the colleges have, from the outset, been interested in three questions: What changes in its students should the college seek? How may the college effect the desired changes? How well do students achieve these desired changes through their experiences in college? The presumption is that, because of differences among colleges, the answers given to these questions will not be identical.

In the Cooperative Study in General Education the first of the three questions leads to a consideration of the students' attitudes, beliefs, interests, activities, abilities (such as ability to think critically), skills, and informational resources. The question, What resources do students need? has been raised with reference to such areas of experience as health, philosophy of life and religion, and personal-social relations. In judging the needs of students, colleges have compared the present status with carefully considered judgments of what this status ought to be. The gap between what is and what ought to be has been regarded as a need. The question, How? leads to explorations related to the reconstruction of courses, to reallocation of responsibilities for providing helpful opportunities to learn, to the study of ways of using audio-visual aids, to modifications of internal organization of the college, to the determination of factors associated with desired growth in students, to changes in the activities of student counseling, and the like. The third question, How well? leads to problems of evaluating the achievement of students particularly as to attitudes, interests, and abilities. On the whole, the colleges in the Cooperative Study in General Education have felt less urgent need for improved evaluation of the informational resources of students than for other sorts of resources. The colleges desire to use evaluative evidence not so much for rating or marking students as for discovering ways of improving the selection and organization of subject-matter, taking account of differences among students, providing improved opportunities for learning, and improving the counseling of students.

The analysis of such general problems of concern to colleges as these leads obviously to the identification of a wide range of related specific problems. Various interested persons undertake to study them with the primary aim of improving the educational program of the college.

VIEWED as planning, a college program of self-examination involves two actions. First, a faculty investigator has the problem of determining courses of action appropriate to his purposes and resources. Second, as a matter of institutional policy, the college has the problem of creating the conditions under which the program of self-examination may operate successfully. The word *program* refers not so much to the formality or the scope of organization and procedure as to the idea that investigational activities are related both to each other and to the college's entire effort in education. In the aggregate, these activities constitute an integral, ongoing part of the

total college program. The investigator and the college as a whole have a stake in the process of self-examination. The word *program* implies a college commitment to the idea of self-examination as a policy.

What are the characteristics of a desirable college program of self-examination? Although the detailed answer will differ with institutions, some general characteristics of a helpful program may be suggested. The relative importance of the six characteristics following may vary with colleges and in any particular college from time to time, but they have significance in relation to each other, not as disparate factors. No attempt is made to consider here all the major characteristics or to develop comprehensively the implications of any single characteristic.[1]

When the institutional activities of self-examination have unity and design appropriate to the objectives of the college the values of self-examination are enhanced. Foresight in planning such a program will aid in leading to unity and appropriate design. By planning, faculty members in a division may concur in identifying a major problem in which everyone has a genuine interest. Some individuals may then, without wasteful duplication of effort, concentrate upon the study of certain aspects of the problem. What one investigator learns, contributes toward the solution of the major problem. Such concentration upon the various aspects of a major problem helps to avoid the dangers that any investigation will be discrete—a thing apart that has no recognized relationship to other investigations, that studies will in effect become ends in themselves, that efforts at self-examination will be diffused and varied, or that resources will be used in relatively unimportant problems.

In the Cooperative Study in General Education teachers in the sciences studied the problem of determining the general-education objectives of science instruction. Although the teachers were interested in determining objectives in five areas of living, they determined to concentrate first on personal health. They decided to start with inventories to determine the nature of students' health practices, information, interests, attitudes, ability to employ critical thinking, and skills. The group proceeded to identify the specific problems which the major problem involved and to divide the work on these.[2] After inventory results were available the group again identified a variety of problems involved in the use of results[3] and divided the work. Since each worker contributed toward the solution of the major problem, no investigation was disparate or unrelated. The process had a measure of unity.

SECOND, when the activities of self-examination have purposes that are clear and important to the faculty, the values of self-examination

[1] In the final reports of the Cooperative Study in General Education a more extensive analysis will be attempted. The final report is to be published in six volumes which are now in press.

[2] Heil, Louis M. "Determining Objectives of Science Instruction for General Education," *Educational Record*, XXIII (January, 1942), pp. 94–105.

[3] "Suggested Investigations Involving the Use of Health Inventories." 5835 Dorchester Avenue, Chicago: Cooperative Study in General Education, C.C.S. Bulletin, No. 3139.

are enhanced. To the individual worker the value of activities of self-examination is that of studying a particular problem to the point of reaching a useful decision. If the purpose of an investigator is to determine what students believe to be their most important life goals, and if he constructs and uses an inventory which is appropriate to this purpose, he accomplishes one which to him is worth while. He may value not only his findings, but also his incidental insights as to methods of evaluation.

From the point of view of institutional policy, however, the matter of purposes and values appears in larger context. As a matter of policy why should busy faculty members take the time to make their own studies? Why not rely entirely on the findings of outside specialists who are expert investigators? Is it not clear that many research studies by outside specialists have significance for the particular colleges?

In general, the answers to these questions stem from the large differences among colleges and the dynamic character of society and of education. A faculty member normally has a better opportunity to know local influences than does an outside specialist. He knows, for example, his own opinions about the problem and those of his associates. He knows the problem as an immediate reality rather than as an academic and abstract question. A faculty investigator, working when advantageous in collaboration with outside research specialists or consultants, has a good chance of making a directly helpful study because his investigation is likely to be more valid and relevant to the real issues, and because his findings are more likely to be in the thinking of the ultimate consumer, that is, the person who made them and will use them. Historically many potentially useful studies in the literature of higher education are not actually useful because the practicing teachers do not read them.

Because in many respects each college situation is unique, many educational generalizations do not apply in the same way to all colleges. Any particular college, therefore, as it seeks to improve its program of education, has its own distinct problems. The college may need to create as well as to select; to adapt as well as adopt. The problem of synthesis for each institution is its own. The quest for "the one best way" has proved fruitless. No one best synthesis seems to exist.

The case for a continuous or ongoing process of self-examination seems clear. The changing demands of society and the progress of research in problems of education continuously affect colleges. Often larger and different populations of students attend the college, employment conditions change, problems of war and postwar reconstruction appear. In a multitude of ways new problems for colleges arise. Problems once "solved" do not stay solved. Continuous need for self-examination exists.

A few purposes of self-examination which some faculties have valued from the point of view of institutional policy would include those enumerated. The first is, to base decisions

on valid evidence. Evidence derived from studies and interpreted impersonally has power to affect men's thinking without coercing them. Many cherish this sort of authority as opposed to the authorities of precedent, tradition, the pronouncements of a person in authority, and the like. The second is, to utilize in local planning and action the contributions of specialists. A person who himself has made a study tends to develop more substantial interest in reading what other students have done in facing the same or a related problem. A producer of studies is a better consumer of studies by others. A person who is making a study can therefore work more profitably with a visiting consultant. In various other ways the activities of self-examination may set the stage for the greater use of the contributions of specialists. The third is, to foster intensified awareness of concrete problems in their significant relationships. A commonplace observation among investigators is that a study raises more problems than it solves. One problem of an able investigator is to avoid inviting questions which are tangential to the main problem. This tendency, however, serves advantageously to increase personal awareness of problems. The fourth is, to develop new hypotheses for the improvement of educational practice. People have a tendency, in the absence of new evidence, to ride their hobbyhorses into the battle of discussion and to emerge with few, if any, new hypotheses. Discussions that are centered upon the analysis of evidence and the consideration of its implications for practice seem more likely to produce significant new hypotheses that people will desire to examine and to test.

A THIRD major characteristic is that a college program of self-examination is enhanced when guided by sound principles of procedure. In reality such a program consists of an aggregate of related studies by individual faculty members working with appropriate collaboration. Each study will likely prove helpful when the investigator proceeds in the light of some basic assumptions or principles. By way of illustration, one principle is that philosophizing inevitably becomes, directly or indirectly, an essential aspect of every study. Mere fact-finding or fact-counting, however essential, does not of itself answer the question, What ought to be? Philosophizing, in fact, predetermines the value of status studies, in that fact-finding guided by hypotheses, derived by philosophizing, has proved more significant than "hit and miss" fact-finding which is not guided by explicit hypotheses.

In the study of science objectives, for example, one hypothesis of the science instructors was that students should avoid subscribing to the belief that there is one best practice or one best status in health matters. The investigators were then able to determine fairly well the extent to which students accepted this belief as it related to various aspects of personal health. The hypothesis, derived by co-operative philosophizing and stated explicitly at the outset, guided the process of fact-finding and gave the

facts, when obtained, significance and meaning.[4]

Another principle is that the investigator who proceeds with knowledge of relevant techniques and findings of other investigators has better prospects for using his time productively. Other principles could be elaborated. They relate to such factors as the importance of using locally available primary sources of information (facts from and facts about students); of considering many sources of relevant evidence (the academic tradition, judgments of subject-matter specialists, studies of society, of American youth, psychological evidence, contributions of philosophy, and the like); of undertaking at one time the study of a problem of manageable proportions; and of using the simplest techniques of investigation that are appropriate to the purposes of the investigation and to the resources available, and the like.

ANOTHER characteristic is that when the activities of self-examination have been related to the changing needs of the college, the values of self-examination are enhanced. Rather than becoming stereotyped or frozen, these activities properly are subject to change in the light of new facts, changed insights, or realignments of evidence.

A flexible self-examination program results from continuous, co-operative planning, evaluation, and replanning—always with the accepted and evolving purposes in view. Devices, organization, and facilitating intermediaries in such a program are recognized as means, not as ends. Means are invented when need for them develops. Thus a committee comes into existence to perform a function; it is not created on mere intimation that it might be able to find functions for itself.

A further characteristic which deserves mention is that the activities of self-examination are enhanced when they form an integral part of college practice. Rather than having a place as an incidental, or spare-time activity, faculty investigations deserve the dignity of assured status among other college activities. They deserve substantial financial support, although quite a small portion of an institutional budget will support a significant program of self-examination. Experience shows that severely limited financial resources need not destroy the possibility of such a program. Administrative policy can give it status as an integral part of the college program, and successful participation in it may be considered in promotion. Collaboration in it may be judged sufficient reason for a temporary reduction in the other duties of a faculty member. The policy of insisting upon evidence as a basis for planning changes in curriculum, course organization, or other aspects of the educational program serves to emphasize the importance of self-examination. What is the evidence? is a question which points up the case for self-examination.

A sixth characteristic—*sine qua non*—is appropriate leadership. Some functions of leadership deserve mention. Programs of self-examination normally do not spring spontaneously

[4]Heil, *op. cit.*, p. 103.

into full growth. Rather they evolve, in part, because of the persistent effort of a leader who, seeing values to be achieved, proposes promising courses of action. Since the activities of self-examination themselves are evolving, these proposals are modified continuously to reflect emerging needs, the contributions which groups make in discussing proposals, and the like. The leader also encourages individuals to undertake promising studies by assisting in identifying and clarifying aims which teachers have in common; stimulating interest in the formulation of hypotheses; emphasizing important problems which otherwise may be overlooked; suggesting ways of investigating; fostering discussions of problems, relevant evidence, gaps in the evidence, critical assumptions; and encouraging studies of importance.

Another major function of leadership involves providing an environment which is conducive to increasing reliance upon the process of self-examination by removing obstacles to individual investigations, by providing special resources, and by co-ordinating the activities of self-examination. The obstacles include excessive zeal for perfection which interferes with action, the absence of really important educational hypotheses, the tendency to attempt to do too much at once. The leader may exercise influence democratically.

The leader may help by providing various resources which facilitate individual effort—consultations, library materials, and clerical assistance. He may make necessary provisions for the effective dissemination of information regarding the problems, techniques, and findings of the investigations. He may provide sufficient administrative flexibility to admit the testing of promising procedures or hypotheses in practice. By the co-ordination of activities he may arrange an environment which is conducive to individual activities of self-examination. The co-ordinator must know the activities to be harmonized and must disseminate information appropriately. He may assist in division of labor without sacrificing mutuality of interest and co-operative activity. Waste will likely result when a committee undertakes a one-man job or when one man undertakes a committee job. Careful judgment in the allocation of functions pays substantial dividends.

Experience suggests that committees under effective leadership may serve helpfully in such activities as clarifying purposes; suggesting, with illustrations, possible courses of action; appraising the action of an individual delegated to execute the courses of action; and replanning in light of the appraisal. The individual, however, may most appropriately do the actual work of making a study or a part of a study, for example, preparing a test, organizing a new unit in a course, or proposing a change in the co-ordination of student-counseling activities. A committee normally serves best, for example, in reacting to definite agenda, to a proposed study, or to the findings of a study. Without definite agenda committees may flounder. In any case careful judgment in the allocation of functions serves an essential need.

An Open Letter

By CARL E. SEASHORE

Addressed to Women in Graduate Schools

LESS than fifty years ago a young woman, who later became one of America's most distinguished scholars, was refused the Ph.D. at Harvard for several years although she had complied with the qualifying requirements for that degree. When I entered the Yale graduate school in 1892, I think there were three women in the University, all majoring under Mr. Ladd, who received them sympathetically. It has been a long leap from such beginnings to the present constituency of women in graduate schools, unprecedented in the world.

Among the perennial questions arising for women who wish to take graduate work are such as these: What is to be my real objective or goal in this study? Shall I work toward a degree? Shall I engage in research? What shall be my major? What will it cost? How long a course shall I plan? What avocational or extra-curricular activity shall I maintain? Shall I prepare for an immediate job? Shall I prepare for a professional career? Is it necessary to do either of these? What is the outlook for a woman in a career? Will it pay? Will noncareer study pay? What are the possible objects of graduate study aside from preparation for a job or a career? What shall be my attitude toward marriage? Is there danger of becoming a neurotic old maid? What is the effect of intensive study on physical health? Does graduate training obligate one to learned services? Does graduate training make a woman mannish? What alternative outlets for advanced education outside graduate work could I consider?

These are all vital issues which a young woman will naturally attempt to solve for herself in consultation with parents, friends, and educators. During the twenty-eight years of my deanship in a state university I have had the privilege of discussing questions like these with thousands of young women. I shall not attempt to answer all these questions here, as each case is individual; but from my firsthand experience there have grown certain convictions which may help young women and administrative officers in graduate schools.[1]

[1]At various times I have attempted to express my psychology and philosophy of education in a practical way in "open letters" to specific groups; such as Freshmen, Sophomores, Juniors, Seniors, and graduate students, incorporated in *A Preview to College Life;* professors [*School and Society*, LXVIII (September 17, 1938), pp. 349–56]; deans, [JOURNAL OF HIGHER EDUCATION, X (January, 1939)], and junior-college deans, *The Junior College Movement* [New York: Henry Holt and Company, 1940, Chap. VIII]. Women in graduate schools constitute a group with educational issues peculiarly their own and pertinent at this time.

Women in America are now admitted to practically every learned occupation, including all the professions, technologies, and arts. The facilities for graduate training in graduate schools have increased fully apace with the general emancipation of women in the learned world since the beginning of this century. The leading graduate schools admit women on an equal basis with men, and there is but little differentiation in the types and objectives of training. At the same time technical and professional qualifications in all learned activities have been advanced at an impressive rate for both men and women, often making graduate study mandatory. It is therefore natural that young women planning to do graduate work tend to think critically about a learned career.

THE bona fide graduate students fall naturally into three groups on the basis of the recognized objectives of study. First and most populous is the group of those who come in for a year or two to prepare for a specific job—professional, semiprofessional, or technological. Many of these, of course, face uncertainties, but they have a genuine desire for specific training and plan their work wisely for the enrichment of their personal lives. Here the profession of teaching in secondary schools is foremost. Some states require at least one year of graduate study for certification, and in nearly all states this standard is recognized with or without legislation. This field of occupation is open especially to women. There is also a rapidly increasing demand for women in many other types of jobs which require a year or two of technical or semiprofessional training, now provided in many graduate schools. Women with such definite objectives are usually well oriented; instead of rising to a job through the school of hard knocks they travel with the speed of a streamline train through graduate preparation for a definite job already in sight.

A second group represents a considerable body of young women who feel that if things go well they are going to be happily married to a man in some learned career, and they therefore pursue liberal graduate work in order to keep apace with their prospective husbands who will have long years of professional, technological, or business training. With these women the problem is not to compete with men for a job but to gain a liberal education so as to make them fit helpmates for men in learned careers who are able and willing to support their wives. A woman who is going to marry a doctor after his four years of college, four years of medicine, and two or three years of internship, needs time and opportunities to prepare herself. This time may well parallel his long years of preparation and should result in the development of power for high cultural leadership and free-lance creative work in some specialized field which becomes her avocational career.

Then there is a third group, distinctly career-minded women, who proceed logically to the doctorate or postdoctorate work with the definite purpose of entering a learned career, whether married or not. It is these

women who confront the most serious problems of orientation and need the most helpful guidance.

For all graduate women, my greatest concern has always related to the necessity of developing and maintaining physical and mental health as a foundation for all types of wise living, happiness, and success. Many girls come with high credentials from colleges where their one distinction was scholarly record at the sacrifice of physical and mental health. They tend to take their graduate work so seriously that nothing matters except success in their studies. And in this they are often unwisely encouraged and abetted by their professors. During my administration I always upheld the slogan, for both men and women students: sports, diversions, or some form of physical activity out of doors at least one hour every day. Graduate students are particularly prone to the development of what the English have called "Americanitis"—a breakneck rush for a specific goal. American students should emulate the attitude of European students whose first question of a new acquaintance in the learned halls is, What is your sport? I have often faced brilliant women students with the harsh query, Are you going to be a dictionary grind or a laboratory rat? The grand rush for a degree or other measure of academic success threatens a brilliant student with the deterioration of physical and mental health. In a charge to initiates of Sigma Xi recently I said:

Indeed, the recognition of the possibilities and the significance of physical fitness is an achievement of modern science. It is a matter of intellectual economy and scientific morality. The scholar is now not only expected to show good judgment in regard to matters of physical health; but, in the culture of today, the maintenance of health has become a moral question. There are two kinds of suicide; one where the individual snaps out his life in a moment, the other where he spills it gradually in defiance of reason and morals pertaining to health. The intensive researcher must work hard, but he must also master the art of loafing for relaxation.

A large number of graduate women fail to realize the importance of cultivating their social natures, including the various social, ethical, aesthetic, and religious amenities which constitute the charm of an educated woman. They fail to realize that life in the graduate school is not only a preparation for the future but is the high peak of facilities and responsibilities for living in the present. They do not register for this, and it is therefore frequently woefully neglected and ignored under the severe pressure of a heavy schedule of classroom and research assignments. It is not necessary that a woman who seriously enters a professional career should sacrifice the development of her personality as a cultured woman.

GRADUATE work is tailor-made for man, and women often approach it in a mannish attitude and with interest in mannish objectives. This is often illustrated in the choice of a major. For example, one day a fine normal girl—a Phi Beta Kappa who proposed to major in mathematics—came in to my office. I asked, "What are you preparing for?" "To teach."

Then I asked the embarrassing question, "For how long?" And, taken unawares, she made a fair prediction, "Possibly two or three years." "And then what?" An interesting train of thought arose in her mind for the first time. I asked, "Is mathematics a subject which is likely to be continued as an avocation or function naturally in your home and social environment throughout your life?

A dean must not prejudice a student against any subject. I realized that a considerable number of women would make the teaching of mathematics their life careers or go into some technical field in which mathematics is the first requirement. But these eventualities were not present in her case. The discussion then naturally centered around the possibility of her preparing to teach a subject which would be of peculiar cultural value to a woman in that it could be pursued as a career before marriage and would be a means of enriching and shaping her place in society as a cultured woman. The result of such an interview was usually a second thought and a planful decision.

A large proportion of graduate students are definitely career-minded and often plan their entire graduate training with that sole purpose in view. It is the subject of their table talk; it is the topic of discussion for pet peeves in their own group; it is the front presented to the dean when they register. For this, the dean is in part responsible because special graduate facilities—scholarships, fellowships, and assistantships—are often awarded on the basis of a prediction of fitness for service in some learned career.

It is a good front to present no matter how remotely it is based on fitness, need, and enthusiasm for a career. The calamity of becoming an old maid is often overlooked. The real and wise intention of most normal women undertaking graduate work is to prepare for being happily married to a scholarly and cultured man. Indeed, this is the purpose most often achieved in graduate residence, which has often been spoken of as a match factory. But it would be utterly foolish for a girl to substitute the profession of this objective for that of a career in her announcements from the house tops.

PREPARATION for a career is often the best way of reaching other goals in that it gives a woman a sense of independence. If necessary she can pursue her technical work before marriage, and in case of adverse circumstances she will have something to fall back upon. But in my judgment the chief reason for favoring the career attitude is that the type of occupation chosen for a woman can be of as high cultural value for the higher life of a woman as general training can be when pursued without some such objective.

A woman who was working toward her doctorate had been in several times to confer with me about her career. Just before her final examinations in May, she came in to discuss the matter again. I said, "Let us not cross the bridge until we come to it." "What do you mean?" "I mean that I have observed that when a brilliant and attractive woman receives her Doctor's degree there is usually a

young man around the corner." She was greatly offended and went out slamming the door.

The next morning she returned in a different mood, saying, "I have thought over our discussion yesterday and would say that if you wish to build up a large constituency of women in the graduate college, just advertize that 'when a woman gets her degree there is usually a young man around the corner.'" She was married six weeks after commencement, and in the six years since that time has not shown the slightest interest in sociology as a career. Her training in that field, however, was a superior preparation for the life she is now leading in her place in society.

A NATIONAL woman's organization made an inquiry, attempting to get statistics on the achievement of graduate women in learned careers. Those interviewed were asked to state the character of their achievement. My wife, who had been a graduate student in the classics and in philosophy, replied, "I have reared four sons," implying that she had achieved something and that marriage in itself is a career. Her classical training and philosophy had functioned in the home and in society. She recently expressed this view:

> . . . I would suggest marriage itself as a career, exacting in its demands upon a woman as a wife, a mother, a citizen interested in improving the environment of her children, a friend and gracious hostess to all who enter her home. Solomon has said that her price is above rubies, and I believe that happiness and inner fulfillment come to her more often than to a woman who tries to combine marriage and a career. I know, however, that it is possible for a woman to tackle two full-sized jobs if she has twice the ordinary physical and emotional vigor and balance.
>
> But a wife's career presents many hazards to happiness in marriage. In the first place, it usually postpones and limits the number of children, who are the satisfaction of later life. If it causes neglect in bringing up children, it can never compensate for the grief caused by an unsuccessful child. A successful career often arouses a husband's inferiority complex and his feeling of neglect. For genuine happiness, I believe that a woman should not put her career before her husband and her children. Let her make the career rather an avocation to enrich her life and personality and let her have no inferiority complex about the value of fine children or her share in the partnership success of her husband and children. Fine children are a greater satisfaction and asset both to the parents and to the state than a hundred mediocre career products forgotten in a month and gone with the wind.[2]

While for countless reasons early marriage often blocks opportunities for graduate training for women as well as for men, delayed marriage on the part of a graduate woman is often of great advantage. Graduate study pursued for some years makes rapid and forced changes in personality. There will be a progressive change in tastes, aims, goals, and eligibility, and there will be a widening of experience and the development of good judgment which often results in the choice of a well-suited mate as the new lure

[2]Quoted in *Modern Marriage*, by Moses Jung. New York: F. S. Crofts and Company, 1940. pp. 72–73.

of attainment. There are, of course, advantages in early marriage by graduate students where a wise choice of a mate is made and where they are financially independent and free for companionship in their studies.

IN SPITE of the fact that the place of women in American culture has improved so greatly in modern times, the fact remains that most of the jobs go to men. When I became dean, we favored the practice of giving graduate stipends to men and women without discrimination on the basis of sex. The qualifications of the women applicants usually equaled those of the men, and our tendency was to appoint about the same number of each. But after some years we made a survey, the result of which was surprising. We reviewed the present status of graduate students who had been awarded stipends in the University during the first twenty years of the graduate college but limited the inquiry to those who had been out at least five years. During the fifteen years thus surveyed, there were more than forty men who had achieved marked distinction by becoming leaders in their professions, filling chairs of presidents, deans, directors, and heads of divisions, and leaders in other types of learned careers. Yet from the same period, covering an approximately equal number of stipend holders, the highest academic achievement of any woman was that of assistant professor. From the point of view of the career woman, this seemed almost unbelievable and distressing; but to the educator it was not necessarily so, because the great majority of women had found themselves in avenues of life in which the investment of the university had born rich fruit. This survey was made in 1920 and since then the situation for women in learned careers has been greatly improved.

Having gained some reputation as a graduate adviser, I have frequently been consulted by young women throughout the country. Here is an example: A very brilliant young woman, coming from a wealthy family with a reputation for high learning, had finished two years in the graduate school and had to decide whether or not she should become a candidate for the doctorate. Instead of answering her question, I asked her to draw up a balance sheet listing on one side the reasons for, and on the other the reasons against going to the doctorate. Her analysis revealed a remarkably keen insight into the evaluation of the situation. Among other things she had on one side that she was a lover of learning and would pursue it in any event; that she had the means for continuing her study here and abroad at leisure; that her associates were among men who had Doctors' degrees; and that she took great delight in engaging in original investigations or creative work. Among items on the other side were these: that accepting the doctorate carried with it an obligation to put into practice the technical training obtained; that if she did not take up a learned career the University might count her a loss; and that she had found a life interest in cultural studies which she could pursue with greater freedom without working for her degree. When she

had struck her balance, I asked her what had been her deciding factor. She said, "The first item on the negative side, although of course, other factors weighed heavily." How many graduate women strike off such a balance sheet at the right time?

Should a woman for whom graduate study is a liberal pursuit engage in research or other form of distinctly creative work? To this question I would give a distinctly affirmative answer, maintaining that no bona fide graduate achievement amounts to much until the student finds herself in the scholarly attitude cultivated by original work. The secondary-school attitude of taking courses prevails all too often in graduate schools. Any student who deserves the privilege of sustained graduate work should measure up in achievement by selecting a field of specialization as early as possible and giving that a central place in her curriculum. The pellet-swallowing of predigested food in a classroom should be avoided in graduate work.

The new opportunities for women in learned fields, the provisions of universities in training for such fields, and the recognition of higher learning in all avenues of life place upon young women a great responsibility for planful forethought and serious application to the pursuit of learning. And to all such women I offer congratulations and express the hope that they may really appreciate and wisely avail themselves of the extraordinary educational privileges now open to American women.

Training the Lay Science Teacher

By THOMAS MORSE BARGER

Suitable Courses in Physics and Chemistry for Teachers' Colleges

FROM a study of the state teachers' colleges in Illinois made a few years ago and a more recent review of their catalogues, the writer is sure there are no such institutions in the state. He questions from available information that there is a teachers' college in our country at the present time. These statements are indisputable if one accepts this author's definition: A teachers' college is a strictly professional school just as medical, dental, law, or engineering colleges are professional schools. As these have but one objective or aim in being—the production of well-prepared physicians, dentists, lawyers, or engineers—so a state teachers' college should have but a single aim—the production of well-prepared teachers for the public schools of the state.

If this should be the sole aim of state teachers' colleges, then it will follow that the courses offered should be arranged to accomplish this. The medical college, for example, does not pretend to offer courses in chemistry or bacteriology which will prepare its students for graduate work in these fields in a liberal-arts college or university. Why should a teachers' college feel obliged to offer courses to prepare for graduate work in liberal-arts colleges? Young persons desiring a liberal-arts education or preparation for research work should go to a liberal-arts college.

A review of the courses in physics and chemistry offered by the state teachers' colleges of Illinois and those of liberal-arts colleges, as taken from their catalogues, shows them to be quite similar—in some cases, identical. It seems that unless their aims are the same, this similarity in the courses offered is undesirable.

Those of us who were members of the faculties of the teacher-education institutions of Illinois during their transition from normal schools to teachers' colleges know the reason why most of the courses in the teachers' and liberal-arts colleges of the state are similar. Briefly: in their fight to retain the right to prepare high-school teachers, the normal schools had to offer a four-year course instead of a two-year, and in some cases this increase in the number of courses offered had to be arranged almost overnight. The liberal-arts colleges already had planned courses of study for four years beyond the high school. The question was raised by the prospective teachers' colleges, "Why not adopt these curriculums tem-

porarily and then adapt them to our needs later?" In most cases the adoption followed, but the adaptation has been sadly neglected by some departments.

A brief, nontechnical statement of the aim of the liberal-arts instructor is to impart factual knowledge to his students. The aim of the instructor in the teachers' college should be so to qualify or fit his students that they will be able not only to go forth and impart factual knowledge of the proper kind to the young people of our high schools, but also to inspire high ideals of leadership, to mold public opinion, and to instill proper desires and ambitions in their students. There is a wide difference between these aims.

When the students in the liberal-arts college have acquired the specified amount of factual information, the instructor may consider that his work has been well done, but the instructor in a teachers' college has a much broader and, in many cases, a more complicated task. The aim of the liberal-arts college may be accomplished simply by exercising or developing the memory; but the aim of the teachers' college cannot be reached unless the student has a comprehensive understanding of children, a reasonably broad background pertaining to the topics studied, and an understanding of how to impart such information to others. A vast fund of factual knowledge does not necessarily mean that the possessor will be a good teacher. Teaching is an art and, unless one is a master of the techniques of this art, he will not be successful. The aim of the teachers' college should be to prepare specialists in teaching, not just specialists in subject-matter.

As Livingston C. Lord, late president of the teachers' college at Charleston, Illinois, often said, "The young teacher teaches as he has been taught and not as he may have been taught to teach." Those of us who have had any considerable experience with young teachers know this to be true. The realization of the truth of Mr. Lord's statement would seem to determine not only the type of courses to be offered in teachers' colleges, but also the methods of instruction.

EITHER from experience or from study, we are all cognizant of the great change that has taken place in our high schools during the last two decades, and we have noted a similar change in the college-entrance requirements. Formerly, a high-school graduate was fairly well grounded in English, history, mathematics, and science; now a young person may be graduated who has done little more than handwork during his four years of high-school life; and about the only college-entrance requirement is that the high-school graduate must have ranked in the upper three-fourths of his class. Some colleges do not have even this requirement—a high-school diploma is all that is necessary for entrance.

Most modern writers, in criticizing the weaknesses in the results of science teaching in our high schools and colleges, agree upon one of the causes: the complacency of the science teachers and especially the teachers of the physical sciences. Teachers

of physics and chemistry have been among the slowest to make any move to change the content of the courses offered or the methods of presenting these courses to meet the change in the objectives of secondary education.

Too many of the instructors in the physical-science departments of our teachers' colleges look upon themselves simply as teachers of college physics or chemistry. It is true they are such, but the students graduated from these departments must go into high schools where they will be expected to adapt their physics and chemistry courses to the needs of their pupils who are not planning to become specialists or to go on to college. This realization should be a large factor in determining the content of the physical-science courses in the teachers' colleges, and the methods of their presentation.

Every instructor in a teachers' college should consider himself first a specialist in education and second a specialist in his subject. Likely it has been this reversal which is largely the cause of the slowness of the physical-science departments to adapt their courses to the modern trend in education. It is the function of the teachers' college to prepare teachers to go into the public schools to teach physics and chemistry to children, and also to prepare these students to teach the kind of physics and chemistry that is wanted in those schools.

ANOTHER factor should be equally important in determining the type of course offered in our state teachers' colleges. This is the physical conditions under which our young teachers will have to work: the physics or chemistry room or rooms; the apparatus available, or the lack of it; the kind and condition of the apparatus; the number of classes to be taught; and the like.

Many of our young teachers will go into small schools with poorly equipped science rooms. They should not feel entirely lost and unable to offer a strong course in either of the physical sciences. Rather, such conditions should be a challenge to build up a set of equipment which will enable them to offer the students the kind of course that will profit them most. And it may well be the duty of the teachers' colleges to fit them to do this successfully. Such preparation will demand one or two drastically different or additional courses not now offered by the physical-science departments of our teachers' colleges.

Another factor that should receive careful consideration by the state teachers' colleges is really a question of self-preservation. Business and professional men frequently ask a question, worded in different ways by different people, but the gist is this, "Are the facilities of the training school all that the teachers' colleges of this state have to offer that is not also offered by the liberal-arts colleges?" At present "Yes," is about the only truthful answer that can be made with reference to most of the academic departments. This "yes" cannot refer to the departments of psychology and education; in these courses the students get much more that is essential to their preparation

than is offered by the liberal-arts colleges. The libraries of the teachers' colleges have many volumes and periodicals essential to the literature of the profession and to the preparation of teachers not found in other schools. Many liberal-arts colleges and laymen belittle the value of such courses and such literature, and it is difficult for them to appreciate their importance. But in the other fields, the training gained from practice teaching is about all that distinguishes their work from that offered in the liberal-arts schools.

These men next raise the question, "Why should the taxpayers of Illinois support five teachers' colleges when the liberal-arts colleges could accomplish all that they are doing, and at no expense to us, if these liberal-arts colleges were allowed to do practice teaching in our public schools?" They know that this is being done in Champaign and Urbana and in some other places.

The content of many of the courses offered and the methods of instruction in the old normal schools differed widely from those of the liberal-arts colleges. Those of us who have attended both types of school can testify to this. Good teaching methods, the absence of the lecture, the development of poise before a class, high standards in leadership, exactness, love of children, development of the habit of reflective thinking were some of the aims of these older schools, rather than the acquisition of factual knowledge beyond the requirements of those who were taught. In the change, our teachers' colleges have lost much that their students should be offered. Perhaps our teachers' colleges are putting too much pressure upon the factual-knowledge requirement and neglecting the proper emphasis upon development in our students of these other necessary teaching characteristics. The writer is in no way belittling the desirability and importance of factual knowledge, but only that which is not needed by our students in the work that they are preparing to do and that which is gained at the expense of other valuable acquisitions.

IF THE five factors mentioned in the first part of this article are accepted as pertinent and if the aim of the teachers' college is to prepare its students to do the best work in teaching physics, for example, in the type of high school into which most of them will go, the courses, for the first two years at least, would seem to be quite well determined.

This discussion embraces only the courses intended for physical-science majors, those who are preparing to teach these subjects. No reference whatever is made to those who are required to take the so-called orientation or general background courses in physical science. A discussion of the proper content and methods for such courses is an entirely different subject.

Those who have supervised the teaching of physics in the high school know that the greatest weakness of the beginning teacher is his lack of a clear grasp of the fundamentals of the subject. It is the writer's belief that the most valuable first course in this subject should be a full year of general physics, a five-hour course at

least, covering the complete field—that is, the mechanics of liquids, gases, and solids; heat; magnetism and electricity; sound; and light. This should be a continuous course—not broken up into term or semester courses that may be taken in any order. If the subject is properly planned and taught, the information gained in the study of one of these divisions can and should be used by the student in understanding each of the succeeding divisions; that is, the study of light should be taken up last as it offers such a wonderful opportunity to review all the preceding divisions.

Neither college textbooks nor laboratory guides would be used, as these, for the most part, are prepared for liberal-arts schools. Instead, it is suggested that as many different recently published high-school textbooks as there are students in the class be used—one for each student. Only such topics as have everyday, practical applications would be taken up. This would mean the omission of the absolute units; the pendulum, falling bodies, static electricity, and numerous other purely technical topics. These could be included in later courses. The topics would be assigned and recited upon by the students—not lectured upon by the teacher. The use of formulas would be barred, with explanations substituted. The aim of all the work should be to have each student get a clear picture of the terms, topics, laws, and principles, so that he would be able to give these clear pictures to someone else the coming year. The definitions of the terms used would be discussed by the class and a best or clearest statement agreed upon. The same treatment would be accorded the laws and principles. Library references for broader background material would be given by the instructor. In some cases, if reference material were not available in the library, a discussion could be given by the teacher. Fahrenheit's work in developing his thermometric scale, the controversy between Charles and Guy-Lussac, the development of the reciprocating steam engine from Newcomen's atmospheric engine are a few illustrations. Everything would be taken up from the standpoint of the teacher to prepare him for teaching the subjects to high-school pupils and not be restricted to "quizzing" from the textbook. Class recitations of Socratic type would embrace the greater part of the course, laboratory work playing a less important rôle.

OF COURSE there should be laboratory work, but it would be of a kind to prepare the students to carry on such work most successfully in the public schools. When the theory of some law or principle has been mastered, a test of such law or principle may be made in the laboratory, but in terms of its everyday, practical applications. Pertinent questions concerning these applications should be asked and answered in "writing up" the experiment. But the important thing is that the experiment should not be made an end in itself, as is so often done in the college laboratory guide. The individual, the lecture-demonstration, the group-laboratory, and the class-

participation methods should all be used by the class until they are thoroughly familiar with each, as they may have occasion to use all of them in their public-school teaching.[1] Such a course, if properly conducted, will require constant teaching by the instructor, which is as it should be. The old familiar "take it easy" days will be gone forever.

Each year, the author attempts to visit from three to five of his former students who are teaching physics in public schools. He remains until he can have at least a one-hour conference with the teacher. The request of the new teacher usually is to know the use for pieces of apparatus in his laboratory that he had never seen before and of which he does not know the purpose. He also complains of the lack of pieces of apparatus that he considers essential to his work. Some of them he could make himself if he knew how. A few pieces of apparatus in his laboratory are worthless because of some small broken part.

EXPERIENCES of this kind impress one that teacher-training students need a course in the making of apparatus, the repair of apparatus, and in becoming acquainted with some of the older forms not used at the present time in colleges, but often found in the laboratories into which young teachers go.

Such a course would include the rudiments of glass blowing, a knowledge of the construction of sensitive balances, and hand air pump, A.C. and D.C. motors and how to reverse their direction of motion, the replacement of brushes, and the like, so that almost any type of simple repair work might be done. It should include the making of simple types of apparatus. The three-horse evener, pressure proportional to depth apparatus, lamp banks, and motor and dynamo models for developing the theory of operation are but a few suggestions.

Most of our colleges have numerous pieces of apparatus which have been relegated to the storeroom because of their antiquity; more modern pieces have been substituted. The students should become acquainted, at least, with these older pieces and their uses, because some such equipment may be found in their schools. They should be taught how to adjust the mercury in the historical J tube to demonstrate Boyle's law. Many of the small schools do not have modern apparatus used to teach Boyle's law.

In such a course students should become familiar with the different types of picture projection machines and with the electric-clock system, as the physics teacher is often called upon to operate these and to keep them in working order. They should also become somewhat familiar with the modern types of cameras and the developing, printing, and enlarging of pictures. Many other accomplishments might well be included. This could be planned for a year of work or possibly compressed into a semester.

After these two suggested courses have been well planned by the instructors and have been mastered by the students, it does not matter greatly what else is offered them, as

[1] Barger, Thomas M. "Effectiveness of the Individual Laboratory Method in Science Courses," *Journal of Chemical Education*, XII (May, 1935), pp. 229–32.

they will have all that they need to teach physics successfully to high-school pupils. The more advanced courses that might be offered would depend upon the number of semesters available and the needs of the students, as decided by the members of the department.

THE first chemistry course should be a full year of general inorganic chemistry, at least a five-hour course, embracing three single periods and two double periods each week. These periods should be used for recitation or laboratory work as the needs of the students require. This course should be continuous throughout the year and not broken up into term or semester courses; each week's or month's work should be an outgrowth or development from the preceding work.

As suggested for the first physics course, recently published high-school textbooks might well be used by the students, a different book for each student, or two or three students, depending upon the number of textbooks considered worth while and the size of the class. What the young teacher will need in offering a course in chemistry in the high school, and the practical-application viewpoint should be the determining factors as to the content of the course and the number and order of the topics taken up. Examples are the importance of a knowledge of valence to the high-school pupil and the thoroughness of its presentation; the value of writing chemical equations for all reactions; the best and easiest way to give an understanding of the gas laws; the real value of and the number and kind of chemical problems to be given. Another topic which should be fully discussed, even though it may not be settled definitely, is the content of a high-school course in chemistry, that is, should the whole year be devoted to straight inorganic chemistry or should six months be given to inorganic chemistry and the last three months to testing for impurities in the foods we eat and the drinks we infuse, and to testing desserts and candies for coal-tar dyes? The lack of a thorough, fundamental understanding of general chemistry and how to teach it to the beginner so as to develop his interest in the subject is probably the greatest weakness of the young teacher. It should be remembered that the young teacher teaches as he has been taught.

The individual, group-laboratory, lecture-demonstration, and class-participation methods should all be used by the class until they are thoroughly familiar with each, as many of the smaller schools are not equipped to do individual laboratory work.[2]

Such a college course, if properly conducted, will require constant teaching by the instructor, and it is expected that constant reference to the library will be made for articles that will help the students get the viewpoint of the most successful teachers of this subject and their methods of instruction. Many references also may be given which

[2]For a more complete discussion of the author's viewpoint relative to the method of teaching chemistry in the high school, *see* Barger, Thomas M. "Class Participation Exercises vs. Individual Laboratory Experiments in High School Chemistry," *School Science and Mathematics*, XXXVI (April, 1936), pp. 386–92.

will enable the students to become acquainted with more advanced information relative to the subjects studied. A valuable bibliography might be built up for such a course by the instructor and the students.

The second year should be devoted to the study of qualitative, quantitative, and organic chemistry. This, too, should be at least a five-hour course. All that the high-school teacher needs to use relative to these three important divisions of chemistry can be covered in one year of intensive study. To plan such a course, the instructor would be required to know the needs of the high-school chemistry teacher. The instructor who is not familiar with such needs has no place in a teachers' college. The content should be compiled with the practical, everyday, usable idea in mind.

All chemistry majors should take the course in the making and repair of apparatus or a similar course devoted especially to their needs, depending upon the number in the departments and the school program. The modern well-equipped storeroom with its obliging attendant is a handicap rather than a blessing to the student who is preparing to be a teacher of this subject in the public schools. Unless such a course, as has been suggested, is given to the students, they go out pitifully unfitted to cope with the problems they will likely meet in their schools. A chemistry teacher should be able to do any chore involving the rudiments of glass blowing; he should be capable of repairing almost any piece of apparatus which he has occasion to use; he should be ready properly to care for, adjust, or repair sensitive balances; he should be able to make any particular strength solution of an acid, base, or salt; he should know how to use his waste rubber in making vacuum wax, and the like. This is but a partial list of the practical outside-of-the-book accomplishments that the young chemistry teacher should possess when he leaves the teachers' college. Such information could be distributed through the other chemistry courses if the instructors appreciate its value and care to plan the best places for its introduction.

A Co-ordinated Attack

By JAMES C. STAUFFACHER

A Technique to Enlist Faculty Co-operation in the Development of Student Reading Ability

IT IS difficult to envisage the rôle of any educational procedure unless the total program to which it contributes is well understood. A plan which proves successful when used in one educational institution often produces only mediocre or poor results when applied under different circumstances. Much of the success of the procedure herein described is undoubtedly due to its adaptability to the educational philosophy of the school where it is used. Not only has Stephens College committed itself to a program designed to meet the individual needs of the student, but it considers a major aspect of its responsibility to be the development of adequate communicative skills on the part of each student. To this end the Stephens College Reading Program has been developed.

There are three important aspects of this reading program. Basic training in the essential reading skills is given every entering student as an integral part of the English composition course, which is known on the campus as "Communications." In addition to this, remedial training is offered in the reading clinic for those individuals so severely retarded as to require individual clinical assistance. The most important facet of the reading program, however, is the attempt to develop the effective use of reading in the content courses, where it is a basic tool in the acquisition of knowledge. The procedure described in this report was developed as a means for the furtherance of this third and most important aspect of the total program. It has also proved valuable to the clinician in charge of the remedial work.

The technique may be briefly described as a series of faculty panel discussions dealing with the problems of individual students whose work is suffering as a result of some type of reading disability. All members of the staff (including teachers, hall counselor, adviser, and clinician) who have any direct instructional relationship to the student are invited to attend the panel, the objective being to acquire a clearer understanding of the reading problems involved and their implications for teaching. The College is indebted to Mr. Gray, of the University of Chicago, who has been the staff consultant in the development of the reading program, for the suggestions which led to the initiation of this procedure. The methods developed under his guidance have proved to be

admirably adapted to the improvement of student guidance in reading and have resulted in a better understanding of important instructional problems in this area by the participating members of the staff.

The cases to be considered as subjects for panel discussions were chosen by the director of the reading program and the reading clinician. The selections were made on the basis of information incident to the work in the reading clinic or as a result of requests by members of the faculty relative to the reading status of particular students.

As soon as a case had been tentatively selected, all available pertinent data concerning the student were collected, including test scores, campus participation, health record, psychologist's report, class performance, and home background. The final decision as to the advisability of calling a panel on the case was made after careful scrutiny of these data. After the case had been selected, notices were sent to each individual whose attendance at the panel was desired, informing him of the meeting time and requesting his participation.

Each panel meeting began with the director of the reading program presenting the assembled personal data concerning the student. This was followed by any information which could be contributed by the adviser, hall counselor, and the various clinicians. Each instructor was then asked to state any observations which he had made or any impressions which he had formed regarding the student and her problems.

After the round-table discussion suggestions were invited concerning plausible changes in procedure to be used by the various members of the group in their contacts with the student. This attack has met with varied degrees of success, depending upon the nature of the problem. In each case, however, some promising suggestions were forthcoming.

Soon after each panel each participating individual received a summary of the information and suggestions resulting from the meeting, together with a questionnaire designed to evaluate the participants' attitudes with respect to probable values resulting from the panel. A summary of these reactions is included in another section of this report.

TO ENABLE the reader better to evaluate this project, a transcription of the summary from a representative panel discussion is given. No attempt will be made to reproduce all the data concerning this student. Rather, an effort will be made to indicate briefly her deficiencies, the most important contributing factors, and the nature of the suggestions offered during the discussion.

Case M—

Miss M. who has been chosen as the subject for this panel has a high intelligence score, indicating general ability above the average. In spite of this, she ranked only forty-fourth in her high-school graduating class of 104. She has been reported as having serious difficulties in four of the five courses she is now taking. This is far from the standard of achievement to be expected from one of her ability. Her performance on the

entrance vocabulary test[1] was about average. The results of the Washburne Social-Adjustment Inventory indicated a slightly subnormal personality adjustment. The Stephens reading test revealed low ability in most areas of reading skill, particularly in rate of reading. This result was confirmed by scores made on the Iowa Silent Reading Test.

This girl is seventeen years of age. Her father is a physician, and her cultural background is above average. She has had no serious illnesses or trouble with her eyes. In high school she showed a preference for her English and art courses and disliked mathematics and chemistry. She reports studying about four hours a day, fairly regularly, and considers this a sufficient amount of preparation. In answer to questioning, she indicated a liking for all her subjects, but preferred her work in humanities.

She began reading at the age of five, and was taught a "word-by-word" method. She has never had any assistance in improving her reading. Her own diagnosis of her weakness is, "I read word by word and too slowly." She never reads for fun, and has had very little reading experience, since her mother has made a habit of reading aloud to her.

The clinical diagnosis indicated no serious mechanical difficulties which could not be remedied easily by exercise. Her clinical work began with drill designed to improve comprehension. This is to be followed by training to increase her rate of reading. She has shown steady progress and interest in improvement.

In her classes in English composition and French she has been slow in her preparation (as indicated by many late papers), shy and slow to respond in class, and in French much behind in the extensive reading assignments. Her best work has been done on short intensive reading and detailed work. In humanities, her favorite subject, she has done well in all except one assignment, which entailed the reading of a play. The other work has all required intensive, careful reading. In biology, her second favorite subject, she asks significant questions, but holds back in class discussion, evidently because of timidity. Her major difficulties have been evidenced through short tests which are frequently given in this course. Her instructor reports that she is particularly inept in following written directions.

According to her hall counselor, this girl is inclined to procrastinate and does not know how to organize and use her time effectively. This is extremely important in light of her slow reading rate, which results in slow preparation. Her shyness is apparent only in the classroom. Otherwise she is well-adjusted; in fact her counselor characterized her as being a typical social-minded first-year college student. She would be judged an extrovert; she is well liked by many.

It was the unanimous opinion of the group that her attitude is favorable; she is conscious of her difficulties and eager to correct them. In the light of her evident handicap (inability to comprehend extensive reading, inadequacy of organizing what she reads, and slowness in reading), the following plan was suggested:

1. Require her to read at length light, easy material dealing with subjects which most interest her. Indications are that these assignments might best be given in humanities and biology.
2. Continue her clinical work in comprehension and organization with an increasing emphasis upon the development of an adequate rate of reading.
3. Give detailed instructions in the organization of her work. This should be supplemented by exercises requiring close analytical study of short materials.

[1] A pre-entrance test given to all students.

THE following is a copy of a questionnaire used in obtaining the reactions of the instructors who participated in the panels to the probable value of the panel-discussion procedure. In the column at the right of each item the number of responses received from the 48 participating members of the faculty have been inserted. The questionnaire was sent immediately after each panel meeting to each person who had participated.

Attached you will find a summary of the recent discussion meeting concerning ————. These discussions have been planned to help us better understand such students and their problems. In order to determine whether or not we are accomplishing this purpose, the Reading Council requests that you fill out this brief blank and return it to Mr. Stauffacher. We should appreciate any comments or suggestions as to how these meetings or reports could be made more helpful to you. The back of this sheet may be used for this purpose.

NOTE: The student in question is not mentioned by name throughout the report because of the confidential nature of the information it contains. Check at least one response.

	Number of Replies
1. Because of the discussion, my understanding of this student was	
A. increased a great deal	18
B. helped somewhat	25
C. not significantly changed	4
2. The discussion of the clinical procedure being used in the case	
A. was of assistance to me in planning how I could best help this student	32
B. was too sketchy. I would have appreciated a more detailed account	0
C. could have been omitted since it did not further my understanding of this student	3
D. did not include the specific *sort* of information that would have been of most help to me in my work with the student	1
Please specify the sort of information you would have liked on the back of this sheet.	
3. The suggestions regarding technique or approaches which might be helpful in working with this student	
A. were not particularly helpful	9
B. look promising and deserve a conscientious trial	35
C. were conspicuous by their absence	1
4. With regard to the selection of this particular student for group study	
A. I believe that her problems indicate that such procedure was advisable	41
B. other cases who are more deserving of attention could have been selected	4
C. this case presented primarily a clinical problem and should not have been brought to the attention of this group	0
5. In my opinion these discussion groups	
A. are helpful and should be continued.	47
B. could well be eliminated	1
C. should be replaced by another plan or the present procedure modified.	0
Please specify the sort of information you would have liked on the back of this sheet.	

Two of the instructors having this student commented on the remarkable improvement shown by her, both indicating that suggestions made during the panel resulted in changes in their treatment of the girl, which may have been responsible for a share of this improvement.

The following comments were selected as representative of statements written by staff members on the back of the returned questionnaire:

"More detailed information as to the kind of material you wished the instructors to furnish would have been helpful.

Since this was the first of such meetings I had attended, I had no idea of what, specifically, would be required of me. However, I felt the meeting was very helpful and I greatly appreciated getting more information on Joan."

"I believe the whole faculty could have been benefited by the discussion we heard on this case. I suggest one meeting a year with the entire faculty present."

"None of these (techniques) will apply to my contact with the student until the psychologist delivers his verdict. I feel that the case was not discussed as a reading-clinic matter, but as a problem of personality adjustment. As I remarked at the time, I can see no connection between her personality difficulties and her reading ability. If there is a connection, I should like to be told about it. I feel that the issue ought to be kept clearly in mind during the discussion."

"These discussion groups are helpful and should be continued because they provide 'patterns' applicable to many students."

Every individual except one believed this procedure to be helpful. The one dissenter (in whose class the student was doing satisfactory work) remarked, "This discussion could well have been eliminated, since the girl is progressing so well." The consensus seems to be that the participating individuals came away from the meetings with an increased understanding of the girl and her difficulties, and, in most cases, with valuable suggestions as to promising techniques for helping her.

One of the most satisfying results of the consistent use of this procedure has been the increasing awareness on the part of the participating staff members of the complexity of factors underlying efficient student reading. It has further provided at least an introduction to some methods for improving this ability. As stated, these cases often provide "patterns" which may be noted in many other students. Although we have no direct substantiating evidence of an objective nature, we feel that there has been a resulting improvement in the instruction of those who attended these discussions. As contrasted with the more usual "indoctrination" method, these cases presented specific examples, which helped to dramatize some of the "why's" and "how's" of individualized instruction.

This procedure seems to the writer to make possible a general improvement of the instruction which the student receives through an increasing awareness of the nature and causes of her reading difficulties and through the use of suggested methods helpful in the elimination of her present difficulties. This co-operative consideration should result in an increased effectiveness in the assistance given to the student by the reading clinician because of the clinician's improved understanding of the student and her difficulties. The method should be effective because the reading and learning problems of the student are attacked co-operatively and co-ordinately by all instructors who have contacts with her. Her emotional and social adjustments should be improved by the effectiveness of the personal guidance given her by her advisers and hall counselors through this increased acquaintance with her as an individual, with her background and her problems.

Two Doctoral Degrees

By ERNEST V. HOLLIS

Comparisons of Opportunities of the Ed.D's and Ph.D.'s Granted in Education during the Decade Ending in 1940

FOR a variety of reasons officials and students in graduate schools of education would like to know whether persons who have earned the Ed.D. degree are as satisfactorily employed as persons holding the Ph.D. degree in education. Yet in the twenty years since the Ed.D. degree was first conferred in course, at Harvard University, there has not been a factual comparison of the occupational status of its recipients with Ph.D.'s in education.

This paper presents a digest of information supplied by graduate-school officials on all living persons on whom either degree in education was conferred during the decade following 1931. The supporting data will be included in a forthcoming publication of the Commission on Teacher Education which analyzes for the decade the employment status of 22,509 living Ph.D.'s in all fields of learning. The faculties of educational institutions represent a concentration of intellectual power which, like the resources of industry, will be diverted from ordinary channels to those more immediately related to the war effort. There is less reason than usual, therefore, for assuming that the trends indicated for the depression decade will continue through the war decade into which we are entering.

An overview of the institutions granting the doctorate in education, in addition to indicating some significant general trends, provides orientation helpful in interpreting the data on individuals. During the decade 24 universities conferred the Ed.D. degree on 804 persons now living. In the same period 55 graduate schools awarded the Ph.D. degree in education to 2,713 persons now living.[1] Many of the institutions did not confer degrees each year of the decade. For the Ed.D. degree the range was from 10 institutions in 1930–31 to 20 in 1939–40; the corresponding figures for the Ph.D. degree are 39 and 36 universities. Michigan, Illinois, and Northwestern, along with five other universities, have authorized but have not yet granted the Ed.D. degree. No additional institutions were found with plans for granting the Ph.D. degree in education.

Except for 1931–32 the number of Ed.D. degrees granted advanced annually from 49 in 1930–31 to 162 in 1939–40. For the corresponding

[1]Data on 19 Ph.D.'s of Illinois arrived too late for tabulation. So far as the compiler can determine, 56 institutions granting 2,732 Ph.D. degrees in education during 1931–40 is a definitive total.

years the number of Ph.D. degrees granted advanced from 277 to 314, but actually one per cent fewer degrees were awarded in the last than in the first half of the decade. There was a marked concentration of centers in which the degrees were earned. As many as 72 per cent of the Ed.D. degrees were conferred in California, New York, and Pennsylvania. Just above 44 per cent of the Ph.D.'s were awarded by New York State institutions alone.

Although the study covers the depression years, 94 per cent of the Ed.D. graduates and 93 per cent of the Ph.D. graduates in education were listed by their schools as gainfully employed in September, 1940. Probably the percentage actually employed is somewhat higher, since the employment status of 3 per cent of the Ed.D.'s and 4 per cent of the Ph.D.'s was unknown to graduate-school officials. The geographic distribution of employment shows 45 per cent of the 804 Ed.D.'s in New York, New Jersey, Pennsylvania, and California. Slightly more than 42 per cent of the 2,713 Ph.D.'s are employed in these states plus Ohio. At the other extreme, in five states in the Union not a single Ed.D. of the decade found employment; six states each employed an average of only three of the decade's Ph.D.'s in education. Some 10 Ed.D.'s and 20 Ph.D.'s of the decade found or returned to employment in the outlying possessions of the United States; 20 Ed.D.'s and 34 Ph.D.'s were employed in China; 20 Ed.D.'s and 52 Ph.D.'s secured or returned to positions in other foreign countries.

A COMPARISON of scholarly workers by gross income was considered and abandoned because it would neglect varying living costs and many other factors of job satisfaction. This decision was also influenced by an inability of institutions granting the degrees to supply adequate salary data. An analysis by academic rank was possible but seemed futile since an instructor in one institution may have as much salary and other job satisfactions as a professor or the president in another institution.

It did seem feasible to make comparisons by the types of institution in which Ed.D. and Ph.D. graduates were employed. All types of higher education employed only 46 per cent of the Ed.D.'s and 58 per cent of the Ph.D.'s in education. Of these totals, universities (graduate work) accounted for 14 per cent of the Ed.D.'s and 17 per cent of the Ph.D.'s; colleges for 27 per cent of the Ed.D.'s (three-fourths of whom are in teachers' colleges) and 37 per cent of the Ph.D.'s; junior colleges for 5 per cent of the Ed.D.'s and 4 per cent of the Ph.D.'s. The shift from over three-fourths of the holders of the doctorate being employed in colleges and universities, which Haggerty documented in 1927, indicates a trend of major social significance. The graduate school can no longer be thought of as merely a place to produce college professors. It has unmistakably entered the workaday world and should now consider modifying its degree requirements accordingly. It will be noted that some 65 per cent of the doctors employed in institutional higher edu-

cation work in undergraduate colleges where the demand also is in the direction of a more functional degree.

THE trends of employment by types of institution are different for the two types of doctorate. A curve describing the trend in university (graduate) employment for the Ed.D. group rises evenly each year of the decade from 8 per cent of the class of 1930–31 to 15 per cent of the class of 1939–40. The trend in university employment for the Ph.D.'s is described by an evenly descending curve, on which 20 per cent of the 277 persons in the class of 1930–31 are employed primarily in graduate work as compared to 13 per cent of the 314 persons in the class of 1939–40. At the college level the trend in employment for the two kinds of doctorate is reversed. On a regularly descending curve, 39 per cent of the Ed.D.'s of 1930–31 and 29 per cent of 1939–40 are in college-level work. The figures for the Ph.D.'s produce a curve rising gradually from 35 per cent of the class of 1930–31 to 40 per cent of the class of 1939–40. The employment trends for Ph.D.'s at both college and university levels are in keeping with normal expectations for those who have exercised "all the rights, powers, and privileges" of the degree for from ten years to three months or less. The unexpected Ed.D. trends probably result from a rising prestige due to the newness of the degree and to the fact that a smaller number of cases are involved in the percentages.

The agencies of elementary and secondary education employed 42 per cent of the Ed.D. graduates as against 25 per cent of the Ph.D.'s in education. The trends over the decade for the pre-collegiate levels of school work are similar for the two groups of doctorates. For the Ed.D.'s the proportion so engaged rises regularly from 36 per cent of the 1930–31 class to 41 per cent of the 1939–40 group. The corresponding increase for the Ph.D.'s is from 21 to 29 per cent. Nearly twice as many actual and potential pre-college teachers and administrators earned the Ed.D. as were awarded the Ph.D. degree. This suggests a wider differentiation than exists in the requirements for the two degrees. As a matter of fact during the decade requirements for the two degrees tended to lose their initial distinctiveness. If a few graduate schools, conferring either degree, aimed definitely at meeting the needs of the non-college school world, it it likely that many prospective candidates would beat a path to their door. The same may be said of institutions whose clientèle seek jobs in educational positions in public and private nonacademic areas, in which 6 per cent of the Ed.D. group and 10 per cent of the Ph.D. group of the decade were employed.

There are a few institutions that with or without taking thought have ceased to be all things to all men who want a Doctor's degree. They serve a fairly well-defined clientèle. For example, University A placed 24 per cent of its Ed.D. graduates in college and university work and 73 per cent of them in elementary- and high-school positions. University B placed

per cent in colleges and universities and 22 per cent in noncollegiate institutions. University B sent slightly more than three times as many graduates into nonacademic work, during the ten years, as did University A. Neither institution publicizes its placement record even though the data might easily be the deciding factor in a prospective candidate's choice of a graduate school. And as strange as it may seem, despite these divergent emphases at the two universities, catalogue requirements for the degree do not differ essentially. These few facts suggest that a thorough study would incline the faculties toward a more realistic statement of objectives and to major modifications of the machinery for achieving them.

ANOTHER meaningful comparison of the two types of doctorate is by the kinds of duties their recipients perform. By this criterion 46 per cent of the Ed.D.'s and 51 per cent of the Ph.D.'s are engaged primarily in the several levels of teaching; roughly 5 per cent more of the teaching Ph.D.'s are in institutions of higher education. It is significant that teaching claimed only 2 per cent more of the Ed.D.'s in 1939–40 than of 1930–31, while it attracted 10 per cent more of the corresponding groups of Ph.D.'s. In other words, fully half the recipients of the doctorate in education were immediately employed as teachers and the greater portion of the group was performing teaching duties at the end of ten years.

Only 3 per cent of the Ed.D.'s and 6 per cent of the Ph.D.'s claim research as their chief function. While there was no more than chance variation in the proportion of each group engaged mainly in research in each year of the decade, it is significant that half the Ed.D.'s so employed were awarded degrees in 1938–40. It is well to remember that in earning the degrees, even in education, the emphasis on preparation for teaching and on preparation for research is almost the opposite of the given figures.

The Ed.D.'s and Ph.D.'s in education of the decade supplied a greater proportion of administrators of all types than did the Ph.D.'s of all other fields of learning combined. Said another way, 40 per cent of the persons awarded the Ed.D. degree and 31 per cent of those receiving the Ph.D. degree in education became administrators. These totals would be slightly larger if persons employed in combinations of administration, teaching, and research were added. These combinations are listed as the work of 2.8 per cent of the Ed.D.'s and 2.7 per cent of the Ph.D.'s. Opposed trends for the two degrees are indicated by the fact that administration attracted 2 per cent more of the Ed.D.'s of 1939–40 than of 1930–31 and 8 per cent less of the corresponding classes of Ph.D.'s. The fact that three-fourths of the Ed.D. group in administrative work are in educational agencies of noncollegiate rank while two-fifths of the Ph.D. administrative group are so occupied also has considerable significance for those planning to give or take work for the doctorate.

By their nature these generalized

figures conceal as much as they reveal. Perhaps a comparison of two contrasting institutions would be more helpful to actual and potential administrators who are selecting a graduate school for advanced work. To know that University A places 69 per cent of its Ed.D. graduates in administrative positions is indispensable information for the prospective student. It underlines in a practical way the importance the institution attaches to deliberately chosen objectives. He should be able to discover that University B, which places only 30 per cent of its graduates in administrative work, is, other things being equal, a less desirable place for him to matriculate even though it may be an excellent school for the prospective college or university teacher.

THE analysis now turns to an examination of the status of the doctors who are improperly employed, whose employment status is unknown, who are unemployable, who are not seeking employment, and are not actually employed. Professional dislocations in society and personality deficiencies in individuals jointly or separately tend to put individuals in the unsatisfactory categories. Altogether 6 per cent of the Ed.D.'s and 7 per cent of the Ph.D.'s are in these classifications.

Even though the data include the depression years, the institutions awarding the degrees list a remarkably small proportion of either group of doctors as employed outside the field of professional preparation. Random checks indicate, however, that institutions awarding the degree were inclined to take the benefit of the doubt in questionable cases. Approximately one-half of one per cent of the Ph.D.'s in education were listed as employed in work not consonant with their preparation. Most of these were engaged at clerical levels on *WPA* and similar projects. While gainfully employed, 3 per cent of the Ed.D.'s of the decade were either in positions unrelated to doctoral training or in jobs which they might have secured with little more formal education than is represented by high-school graduation. Included in such employment are an infantry officer, a village postmaster, a nurse, a real-estate agent, a laundry manager, a banker, and a police-court judge.

Graduate-school officials know nothing whatever about the employment status of 3 per cent of the 804 Ed.D.'s, nor of 4 per cent of the 2,713 Ph.D.'s in education. Scattering information from other sources causes the writer to believe that most of these people are among the actually unemployed. Certainly the figures are large enough to suggest that at least some of the universities do not effectively discharge the responsibility usually assumed for placing and keeping in professional touch with the persons on whom the highest earned degrees are conferred.

In order to discover the amount of actual unemployment it was necessary to separate from those not gainfully employed the persons who are unemployable and the persons who are not seeking employment. Only four persons in the two groups

of doctors were classified as unemployable. These ranged from an insane person to one incarcerated in a penal institution. Housewives and retired professors constituted most of the group not seeking employment. This category includes 1 per cent of the Ed.D.'s and 2 per cent of the Ph.D.'s.

These eliminations leave the admitted actual unemployment at 1.4 per cent of the Ed.D.'s and 0.9 per cent of the Ph.D.'s. The writer estimates these figures would be doubled or trebled if there were added the actually unemployed among those whose positions are unknown. Except for the two classes from the depth of the depression (1932–34) which had slightly more than their share among the unemployed, there was no significant unemployment trend over the decade.

WHAT are the implications of the data for the guidance of graduate-school officials and students? Since, in the worst employment decade in American history, society absorbed practically all of the employable doctors, the unwary may infer the supply of Ed.D. and Ph.D. graduates in education does not exceed the demand. Students may feel encouraged to matriculate for a degree, believing they will be readily and profitably employed. Graduate-school officials may likewise be tempted to expand current programs for the Master's degree to the doctorate level. Some schools already offering the doctorate in education may feel justified in going ahead as usual.

The more cautious and discerning interpreters of the data are likely to make less optimistic inferences. They will know that permanent rather than initial employment is the all-important thing in gauging occupational status in institutions of higher education. They will surmise that many of the university and liberal-arts college appointments are temporary and may later frustrate the process of occupational adjustment. They could cite a large portion of the postdoctoral students in our universities as victims of this type of employment dislocation. They know permanent appointments in most universities and colleges are limited to replacing those who die, retire, or move elsewhere.

The more analytical interpreter will have noticed that the increases in employment were largely in public-school systems, in teachers' colleges, and in nonacademic fields. With teachers' colleges no longer increasing in number or enrollment, the pattern of faculty appointments is likely soon to approximate that prevailing in universities and liberal-arts colleges. Placement in the other two fields and in junior colleges is likely to depend on the willingness of graduate schools to initiate doctoral programs suited to their needs. Apparently there are enough job satisfactions attached to the doctorate in each of the three fields to assure a reasonable flow of candidates in normal times. During and following the war there is likely to be an increasing demand for Ed.D.'s and Ph.D.'s in governmental and private industry and commerce.

In the more astutely directed institutions the Ed.D. degree was launched to meet the needs of practicing school

men. It was expected that the Ph.D. degree would continue to meet the needs of collegiate specialists in education. In the twenty-year interim the lines of demarcation between the two degrees have become increasingly indistinct. With the newer professional degree being constantly gauged for "respectability" by the standards of the older Ph.D. carrying prestige perhaps the increasing similarity was inevitable. The graduate school of education most likely to keep abreast of the changing times will be one that makes a realistic differentiation in its doctoral program based on ascertained differences in job demands. Which of the degrees it offers is of little moment and can be determined in the light of local circumstances. It may offer both degrees if they are functionally differentiated.

The graduate school of education can no longer expect to offer advanced graduate work in all its undergraduate fields. It must deliberately choose the kinds and levels of teaching, research, and administration for which it will offer the Doctor's degree. Almost no graduate department, including education, can hope to secure the physical facilities, the staff, and the operating budget necessary to prepare teachers, administrators, and research workers for the numerous levels of higher education, for the several levels of pre-college education, and for the varied specializations of the nonacademic world. When a school restricts its program it can no longer follow wisely an opportunistic "come one, come all" policy of admissions. To be of maximum benefit to its advanced students and to the society which they serve, the graduate school of the future must face realistically all the issues inherent in restricted offerings and selective admissions. The period of quantity production to provide for rapid turnover and constantly expanding needs seems to be drawing to a close. As is already true in the older professions, the years ahead probably will call for a smaller number of more soundly educated and functionally trained doctors in the field of education. [Vol. XIII, No. 5]

Predicting College Success

By EARLE E. EMME

A Descriptive Bibliography of Recent Research Studies

THE prediction of college success has been studied from several different angles.[1] The rank in the high-school graduating class is generally considered to have the highest single predictive value. Intelligence is considered important when combined with other factors. Tests of various kinds have been used extensively.

The general situation is suggested by Adams who says that the student's quality of achievement during the freshman year in college is best predicted from his high-school achievement (1). Wagner found that prediction based on high-school performance as measured by the average on the New York State Regents examination was the best single criterion at the University of Buffalo (42). Dressel found a correlation of .52 between high-school and college marks. The difference in high-school marking systems was noticeable, however, and made accuracy in prediction much more difficult (12). Strang found a closer relationship between the student's rank in his high-school graduating class and his future success than with his average high-school marks (39). Butsch (9) found correlations between the rank in one's high-school graduating class and his first-semester marks in college ranging between .47 and .60. Schmitz discovered that high-school scholastic achievement is the most efficient single instrument for predicting success (38). Eurich states that a simple measure, over a four-year period, having the highest predictive value for success in college is rank in the high-school graduating class (17). Dwyer found that subcorrelations from the high-school record are better predictors for *A* and *B* students than for those with *C* and below (16). According to Darley patterns of high-school subjects are less valid as indexes of college achievement than high-school achievement and basic measures of ability (11). Dwyer reports in a study made of 1,222 students in the University of Michigan that students from small high schools are less likely to survive in college (15). Mercer found that the predictive value of college admissions showed consistent differences in high-school marks and principals' ratings favoring the group now ranking highest in college (30). There is much evidence that high-school performance or rank is the best single criterion for prediction.

[1]Based on data presented before the annual session of the Iowa Academy of Science, April 25, 1941, at Simpson College. Miss Mary Patterson deserves much credit for her able assistance in this study.

Intelligence is another important factor in prediction. A correlation of .46 was found between college marks and intelligence scores (3). Nemzek found that the intelligence quotient has more value for direct prediction than for differential prediction (31). Beery found that the reliability of prediction of probable college attendance on the basis of intelligence-test scores alone increases as one approaches either extreme of ability (5). Despite this fact, Keys (25) found correlations between intelligence quotients and college marks to be as low as .35. College standing and intelligence give a correlation of .706 according to Hartson (22). Livesay found that the intelligence-test scores of students tested at the beginning and again at the end of their college years were increased (27). Ross states that telling intelligence-test scores, even to lower-ability groups, results in better work and increases their chances for success (35).

COLLEGE marks have some place in the predicting of success in college. According to Gilkey the correlation of the general average of marks is higher than the correlations of marks in related fields (19). DuBois reports that the achievement ratio may have practical value for administrative offices in identifying students who are not achieving what they should (13). Read says that studies of the prediction of college success have usually dealt with the relation of pre-college measures with first-semester marks alone. He reports correlations between pairs of semesters in college to range from .516 to .749. The fourth semester shows closest average agreement with all others and the first agrees as well with it as does any (33). Boardman says, "Scholastic performance during the first three years is the best single means so far tested for selecting students for admission to the senior year" (8). Hepner gives added factors which may explain the factors underlying the unpredicted scholastic achievement of college Freshmen: view the individual as a distinct person, work with him with all available knowledge, and avoid the feeling of contentment with dependence on the general conclusion of statistical analysis (23).

There are several tests which fit quite readily into the prediction of college success. Those most generally used are the Ohio State Achievement Test, American Psychological Examination, the Army Alpha and reading tests. Bishop found the Terman Group Test of Mental Ability correlated .524 with scholarship for the first year in college, while the scores on the Kentucky classification test correlated .574 with scholarship for the first year in college (7). Rigg found correlations between intelligence and first-semester scholarship to be .52; intelligence and four years' scholarship, .43; intelligence and achievement scores, .53; and achievement scores and four years' scholarship, .47 for seven different graduating classes (34). Wolf attempted to predict the scholastic success from the scores of aptitude tests given at the time of entrance to college. Three-fourths of the students showed no difference in their freshman year, but for one-fourth of them, the differential

predictions developed in this study correctly forecasted criterion differences approximately two out of three times. Practically no differential prediction was found to be possible for upper-class performance (44). Paul found that students with high scores in placement tests tend to remain in school longer, earn more hours of credit, and fail fewer courses (32). Hildreth says that if a student is high originally he is likely to remain high, but if he is low, the prediction of ultimate status is less certain. The correlation between the psychological examination and the mark point average ranges from .33 to .60, with a median of .44. Tests in special subjects also have predictive value (24). In testing engineering Freshmen, Bernreuter found that a significant relationship existed between primary abilities and success in other specific courses (6). Templeman states that a vocabulary-test score is a good index of the point average at the end of the first rhetoric course (40). Hanna found that scores on Cooperative English tests and marks in high-school English can be used equally well in predicting success in college English. However, scores of Cooperative tests in mathematics and French are better for prediction than marks in high school (21). Vernon found the better students to be more tense, more dependable, better at concentrating, and less liable to depressions and emotional instability (41). Williamson and Darley (43) show that tests will only predict perfectly if and when the necessary conditions are present in the student. It is conceded, then, that the test has greater significance when combined with other personal factors.

Other factors influencing marks are interest and enjoyment. Gregory states that interest and ease reported by a student in his high-school courses furnished valuable clews for vocational counseling (20). Garrison found that in testing student interest a difference was found in the choices of the students having different home backgrounds (18). Corey says that liking a school subject is rather closely related to liking the teacher (10). Between value, enjoyment, and interest in the class period and interest in the subject-matter Mallory (28) found the intercorrelations to range from .65 to .75; the amount of work in relation to interest and to enjoyment from .35 to .41. Marks correlated with enjoyment .33 and with interest and value .19 to .25.

PERSONAL factors have bearing on prediction of college success. Durea and Love found that scores from a personal-traits inventory showed little correlation with academic standing, intelligence, or admission-blank scores in the number and intensity of problems section of the tests (14). St. Clair stated that the conclusion of previous investigation that there was no linear relationship between personality traits and scholastic aptitude was substantiated (37). Yet other research does not seem to agree with this. Asher and Gray found that personal-history inventory when combined with test scores makes prediction more accurate (4). Manning states that the results

of tests may be affected by illness, indifference, or other personal factors (29). Russell states that success depends more on certain factors—motivation; physical and mental health; personal and social relationships of the student with parents, fellow students, and faculty; on the degree which home and school have prepared students for independent living and self-direction—than on marks and tests (36). Alexander contends that a normal social life usually accompanies good scholastic accomplishment. Although the research is somewhat conflicting, the predominance of evidence points in this direction (2).

All the previous studies have depended on a single criterion. Some persons contend that the most satisfactory means of prediction is by a prediction formula. Manning found a combination of scores on an intelligence test with those on an English test to be most successful. He also says, however, that any prediction formula is defective in individual cases where illness, indifference, or other factors interfere (29). Leaf discovered that two regression equations predict the average college marks of approximately 68 per cent of the students within .44 and .40 of a letter mark (26). This method is probably the best of all those discussed.

Seven criteria for the prediction of college success have been discussed and the foregoing data reveal that rank in a high-school graduating class seems to be the best single criterion for predicting college success. Other factors which cannot be forgotten are intelligence, college marks, tests of all kinds, interest and enjoyment, and personal traits and characteristics. The prediction formula is considered the best method of all since it embraces several factors.

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· With the · Technicians ·

Items Included in Follow-up Studies[1]

As part of its fiftieth anniversary celebration, the School of Education at New York University undertook a follow-up study of its fifty thousand alumni. In preparation for this, students in an advanced seminar on college personnel work reviewed twenty follow-up studies made by universities, high schools, industrial and civic organizations and tabulated all the items included in them. The results are reported here, with an indication of the percentage of studies in which certain items were found. The items of occupational information and the mentioned frequency of each are:

OCCUPATIONAL INFORMATION

Item	Per Cent
Occupation	100
Employed	40
How long employed at present job, employer's name	30
Salary or wage at present, unemployment experience	25
Salary or wage at start, history of start in life, job placements, wage, and salary	20
Length of experience in present job, exact duties in your employment, hours of employment, method of securing employment	15
Kind of business, have you received a promotion within the last ten years, have you held part-time jobs while working full time, date of entering job	10
Please name first and last position; special achievements; is much of your work alone; is much of your work done in close association with others; materials handled; possible injurious working conditions; protective measures; is your immediate superior a man, women, older, younger, same age; how long have you been supervised by a man, woman; have you ever associated a change in position with the fact that your supervisor was a man, woman; has your chief cause of your change in positions been because your supervisor was a man, woman; if you supervise, are workers under you younger, older, same; do you supervise men, women, both; have you ever been discriminated against because of marriage; were you ever demoted for stated cause of age; was your age, at the time, mentioned as a factor in discharge; please state reason for leaving job; date of leaving job; chief occupation problem	5

[1]Reported by Erwin Dingman, Peter Farrelly, and Marthe Quinotte, New York University.

Of the 35 items in the section on occupational information, only one, occupation, appears in 100 per cent of the lists. Less than half (40 per cent) inquire as to present employment; 30 per cent, the length of present employment and the employer's name. Present salary and unemployment experience are 25 per cent each. In the 10- or 15-per cent range fall the items on promotions within the past 10 years, extra part-time work, duties, hours, and suchlike. Nineteen other items are given a ranking of 5 per cent. Of these, some are concerned with occupational hazards, sex, and relative age of supervisors or subordinates, any discrimination because of age or marriage, and reason for leaving job.

Since these lists are tabulations of many types of studies there is less under educational information than one might expect in a follow-up of alumni. For example, 50 per cent ask concerning degrees and certificates held; 45 per cent, educational status; but 25 per cent, regarding continuing education. Other of the ten items are religious and geographical

background (10 per cent each), and educational status of the family (5 per cent each).

Queries as to height, weight, defects, dress habits and any criticism of them, investments, inheritances, place and manner of living, health are among the 26 occurring in 5 per cent of the miscellaneous groups. Nationality, citizenship, color, or race are also in this 5-per cent group. Marital status and dependents have percentages of 20 and 10, respectively. The customary name, address, age, and sex are the only ones given ratings higher than 20 in these latter groupings.

Measuring Student Motivation[2]

This is a preliminary, and very tentative, report of an effort to supplement other types of testing with an instrument intended to detect the extent to which students are likely to apply themselves to their college work. Both the report and the instrument are necessarily incomplete.

A few major items obviously might be expected to be helpful in indicating how the student is likely to spend his time or energy. The extent of the examiner's familiarity with the institution's catalogue, financial distractions, recreational preferences, health, and some phases of character are of this sort. Some of these items (knowledge of catalogue) can be measured directly; others (character traits) seem imponderable, while still others permit the hope that they can be tested indirectly. Of such sort are preoccupation with extra-curricular activities, preferred activities, and seriousness of purpose in attending college.

In these general areas and in a few others, which it was hoped might be relevant, various questions were devised. Some were of the completion type; some, multiple choice; some, simply statements to be checked only if the student felt that they applied to himself. In each of the three revisions of the test useless questions were dropped, and new ones added whose value was yet to be determined.

The scoring scale was determined by two comparisons: the papers of superior students were compared with those of failures and the papers of "achievers" (an achiever by definition is one whose mark rank surpassed his scholarship-aptitude rank) with "nonachievers" (one whose mark rank failed to reach his scholarship-aptitude rank).

This "academic-inclination" test so-called was filled in by 129 Hanover College Freshmen on their first day on campus in September, 1939. The papers were set aside until the end of the first semester, so that knowledge of their contents could not influence any of the guidance workers in their advice to students. At the end of the first semester, prediction of first-semester marks was attempted. This prediction took two forms: an effort to place each student in one of four categories (superior, high average, low average, and failing) and an effort

[2]Reported by W. H. Moore, Freshman Dean, Hanover College.

to predict the rank of each student in the class.

The material used with this class consisted of an alphabetical list of Freshmen, showing the rank of each in high school, his reading speed in cases, with columns containing English-placement rank, scholarship-aptitude and academic-inclination ranks. From the average of his academic-inclination rank and the English-placement or the scholarship-aptitude rank (in this depending on whether the student was above or below the median) the approximate rank was predicted. If this conflicted markedly with the indication from either the reading speed or the high-school record, it was modified appropriately.

On the basis of this ranking, a correlation of .76 was obtained with the rank of first-semester marks. The scholastic-aptitude rank alone correlated only .27 with marks (an unusually low correlation); English correlated .49; their combination yielded .48. The scholastic-aptitude rank correlated about the same with the academic-inclination as with marks. Of 129 predictions placing students in one of the four classifications, only nine were misplaced by more than one group, and none were completely missed. As for survival, of the 25 ranking highest on academic inclination, 18 were in school a year later; of 25 scoring lowest, only 2 remained.

Actually the predictive formula was simpler to apply than its description indicates. Furthermore, if only the English-placement scores and the academic-inclination ranks had been used, not many rankings would have differed.

The next fall 114 Freshmen at Hanover were given the same questionnaire on their first day of school. Without any of the other factors (reading speed, high-school rank, and the like) this set of scores, combined only with English-placement results, gave predictions correlating .76 with marks. Alone these scores correlated .62 with marks, and .27 with scholastic-aptitude scores. As in the previous year, predictions were also attempted in four groups with results as follow:

	1939–40		1940–41	
	Academic Inclination	Scholarship Aptitude	Academic Inclination	Scholarship Aptitude
Correctly placed	90	55	72	50
One group off	30	54	37	49
Two groups off	9	15	5	13
Completely wrong	0	5	0	2
Total	129	129	114[3]	114[3]

Had it been desired to refuse to admit students likely to make marks below *C*, and scholastic-aptitude scores alone been used as the criterion, in the two years of experiment 60 students would have been turned away, of whom 23 did actually do work about *C*, but 22 students would have been admitted who failed to do so. If refusal of admittance had been based on the combination of English and academic-inclination scores, 64 would have been declined, of whom 13 actually did make marks above *C*, but 19 would have been admitted who failed to do so.

Hence, it is obvious that there is still much room for improvement in

[3]Marginal cases were resolved in favor of the Scholastic Aptitude test, and against the Academic Inclination.

the selection of students, but two comments can be made: Of the 64 who might have been rejected, only 4 did work above average; if borderline cases had been admitted, most of these mistakes would have been avoided. Furthermore, it must be remembered that all these predictions for 1940–41 were completely without reference to the students' high-school records and were based altogether on tests requiring about two hours.

An analysis of the second year's data was prepared by arranging papers in order of descending motivation scores, and analyzing performance within each group of ten students. Of the 30 students securing scores above 0, only one failed to earn a mark rank higher than his scholastic-aptitude rank, except for 4 whose academic-inclination rank was so far below their scholastic-aptitude rank as to indicate non-achievement.

It seems plausible to conclude that: Motivation, as an aspect of student success, deserves further investigation; and questionnaire responses have, in one college which is not necessarily typical, given predictions sufficiently accurate to indicate the method is worth further study.

College Faculty Workshop[4]

The Committee on Teacher Education of the Association of Colleges and Universities of the State of New York has decided to hold another Faculty Workshop in 1942, being assured of generous support from institutions and organizations whose contributions made possible that of last year. The Workshop will be held from June 3 to 30 at the State College for Teachers, Albany. The College is modifying its program so that the Workshop will not conflict with the college term.

Procedures will be similar to those which proved successful during the 1941 Workshop, with such modifications as experience and the evaluation by participants suggested. Hours will be reserved for group and subgroup meetings, as they may be planned by their members, and for individual conferences with the specialists who are to serve as consultants. There will also be opportunities for "special interest" groups and for the whole membership to meet with selected visitors.

It has been decided that the major areas in which consultant service will be provided are to be as follows: the development and behavior of children and adolescents, with special reference to the problems of child welfare and the morale of families and teachers in the present situation; reading, writing, and speaking, with particular emphasis upon the interrelationships of these fields; and the professional education of teachers, with special reference to practical experience in the schools and the community. The problems of greatest importance and interest in these three areas have been the subject of careful study by three representative subcommittees.

According to present plans, determined in large measure by budgetary considerations, the twenty-six colleges and universities preparing secondary-school teachers are asked to select

[4]Reported by Harold E. B. Speight, Executive Secretary, Committee on Teacher Education, Association of Colleges and Universities of the State of New York.

two representatives each and the Buffalo State Teachers College and the nine Normal Schools are invited to send three each. The Planning Committee has adopted the following statement covering the type of representative which it is hoped will be selected wherever possible:

The Committee wishes to emphasize the importance of selecting, for Workshop membership, persons who are likely to benefit from the experience and who may be expected to contribute to policy-making on their return. To be specific, it is hoped that each representative chosen will be: aware of problems in his own institution and responsible for assisting in their solution—either already in key positions, or likely in the future to have a share in policy-making; alert, flexible, reasonably articulate, ready to share in group work and to profit by learning of the experience and ideas of others; and willing to attend without administrative pressure, and to co-operate in advance of the Workshop, by formulating the problems on which, in conference with colleagues, they have decided they ought to work.

Where Do High-School Graduates Go for Further Training?[5]

A recent study has been made of the further training which graduates from the accredited secondary schools in Tennessee received during the period from 1930 through 1939. Data for the study were collected from the annual reports of principals, which include names of the previous year's graduates attending institutions of higher learning and the names of those institutions. It is quite likely that the facts revealed concerning the situation in Tennessee hold true for certain other states and for other regions throughout the country. The findings of this study substantiate, in part, the conclusions of a more comprehensive study made several years ago.

Perhaps the most interesting fact disclosed by the Tennessee study is that over one-half of the high-school graduates who go farther in formal training within the state do so by attending state-supported colleges and universities. In 1930, 53 per cent of the total number of high-school graduates of the year before who stayed within the state for further training entered state institutions. By 1939 the percentage had increased to 54. This finding bears out Roemer's conclusion[6] of several years ago that the amount of in-state and out-of-state college attendance is largely determined by the prominence of the state university. He found a high degree of state loyalty in instances of an aggressive and active state university and, conversely, a lesser amount of in-state college attendance in states where the principal university was comparatively dormant.

In the present study the University of Tennessee stands out as a prominent factor in the further training of high-school graduates in the state. Approximately one-fifth of those entering college from the accredited high schools in 1930 chose

[5]Reported by Joe N. Gerber, Coordinator of Workshop Activities, George Peabody College for Teachers.

[6]"Report of the Committee on College Freshman Grades," *Proceedings of the Thirty-Ninth Annual Meeting of the Southern Association of Colleges and Secondary Schools*, 1934. pp. 227–324.

the University of Tennessee. During the decade following, however, there was a definite tendency for graduates to choose the state university less frequently, only 17 per cent doing so in 1939. Along with the decrease in attendance at the University of Tennessee the out-of-state college attendance (14 per cent) changed less than 1 per cent in the nine years considered.

There was an apparent increase in attendance at junior colleges in Tennessee during the period. The increase was by no means so great as that already found in certain other localities—California, for example.

For some of the private and denominational colleges there was a slight increase in attendance, while for others there was a slight decrease. This finding agrees, in the main, with conditions reported by studies in other parts of the country.

At variance with some of the reports from different areas in the United States is the discovery that practically no change has occurred in the percentage of graduates from Tennessee accredited high schools attending business and commercial schools within the past nine years. Tennessee was more successful, however, in keeping these students within the boundaries of the state to get training beyond high school.

There was a slight increase in attendance at nursing schools, and a marked change occurred in favor of technical and trade schools. It is notable that whereas 56 per cent of those choosing trade schools in 1930 attended institutions outside the state, the percentage decreased to 44 per cent of the total in 1939. As soon as data are available for Tennessee trade-school attendance by 1940 and 1941 high-school graduates, there will undoubtedly be found a phenomenal increase in their direction. A number of new technical and trade schools have been established in Tennessee as well as throughout the entire country in response to the need for skilled workers in the program for national defense.

Voluntary entrance into the Army and the Navy almost doubled during the period from 1930 through 1939 as shown by the type of further training chosen by graduates from accredited high schools in Tennessee during those years. Such a trend was to be expected as a direct result of the growing spirit of nationalism and the need for more adequate military and naval power.

Courses in Communications and Public Opinion[7]

The University of Chicago announces a program of instruction and research in Communications and Public Opinion, commencing with the Spring Quarter, 1942. The program is directed by a committee of faculty members from various departments under the chairmanship of Robert Redfield, dean of the Division of the Social Sciences. The Committee undertakes to initiate and co-ordinate studies of local communications and local attitudes with reference to problems of public policy. The training program undertakes to qualify stu-

[7]Reported by Douglas Waples, secretary of the Committee on Communications and Public Opinion, University of Chicago.

dents (especially women and men deferred under the Selective Service Act) for professional service with Federal agencies and others concerned with problems of national morale, analysis of enemy propaganda, the sampling of public opinions, and the social effects of promotional activities. College graduates with basic training in social science and languages may enroll in the summer quarter and any quarter thereafter.

In general the Committee recognizes four major purposes: to conduct fundamental research in the functions, processes, techniques, content, values, effects, and other elements of public communications in their social setting; to utilize the University's resources of men and source materials toward the clarification of current problems in the field; to prepare candidates for professional service; and to offer instruction in the field for other students who desire it.

The program of instruction represents five groups of courses, namely: Nature and Process of Communication, Present Structure and Functions of the Media of Communication, Sources of Content and Opinion, Organization and Control of Opinion, and Measurement of Content and Opinion.

·The·Reporter·

A TWELVE-WEEK summer session at Morningside College will assist students to shorten their time in college. New courses designed to meet special war needs are being offered during the second semester, summer session, and next year. These include ordnance and gunnery, radio operation, industrial safety, problems of taxation, consumer economics, first aid, home nursing, and sociology of the world conflict.

Two of the famous "Chicago Plan" general courses of the University of Chicago, in the biological and the social sciences, are being offered to alumni and their husbands or wives with syllabi and reading lists.

ALL faculty appointments at Haverford, Swarthmore, and Bryn Mawr Colleges will henceforth be discussed jointly by the presidents of the three institutions before an addition to any of the teaching staffs is made. In discussing the development, President Park pointed out that it had been decided before the present war emergency.

At Bryn Mawr the responsibility has been shared by an important Faculty Committee of Appointments. At Haverford and Swarthmore the presidents have acted with the advice of the appropriate members of the faculty. This new agreement does not in any way limit the complete autonomy of each of the three institutions. It does provide a check against unnecessary overlapping and duplication of instruction, and will make an interchange of faculty members easier.

A FOUR-DAY celebration to be held May 1–4 has been planned to commemorate the two hundredth anniversary of Moravian Seminary and College for Women, the first girls' boarding school in the original thirteen colonies. Included among the activities are a historical pageant; an academic procession and convocation; a love feast—a typical Moravian service signifying friendship and brotherly love; a special Sunday preaching service; an alumnae banquet; class reunions and other alumnae activities. The pageant will close with the presentation to the school of a $50,000 gift fund from the general alumnae association. When priorities permit, this fund will be used to build a memorial library.

AN UNDERGRADUATE program of study in American civilization has been announced by President Dodds of Princeton. The new plan, long considered by faculty committees, is designed to achieve an understanding of the traditions of this country "not by preachment, but by offering a field of study in the American heritage." The program will follow two trends comparatively new in higher education. First, the cutting

across of one-time impenetrable departmental boundaries, and second, the lending of realism to learning and the encouragement of individual investigation provided by the conference method of instruction.

RECENTLY the University of Michigan Extension Service and the Engineering Society of Detroit dedicated a new building in the city of Detroit, to be used jointly by the two institutions and to be known as the Rackham Educational Memorial. Funds for erection of the $2,000,000 structure were given to the University and to the Engineering Society by the Horace H. Rackham and Mary A. Rackham Fund and Mary A. Rackham. The opening of this new building means a considerable expansion and improvement of the educational facilities of both the University and the Society in the Detroit metropolitan area.

AN "Answer Please" service designed to answer written inquiries on a wide variety of civilian-defense problems, professional problems of teachers and school executives, and problems of adults has been inaugurated at the Eastern College of Education. The service proposes to answer questions and provide information on various problems of civilian defense and safety, professional problems of elementary- and junior–high school teachers and executives, questions of home, occupational, and avocational interests for adults. It will also supply faculty speakers and student symposium-discussion groups for special programs before various organizations in eastern and central Oregon, the latter upon payment of minimum traveling expenses.

DEFENSE demands for materials have forced the postponement of Emory University's projected building expansion program, made possible through the success of the recent $8,500,000 University Center campaign. It is announced that the necessary funds are on hand and that the buildings will be started as soon as there is clear evidence that they will not interfere with the national defense effort. In the meantime, plans go forward for the development of a graduate center of first rank, although the University administration has formally announced that every undertaking of the new development will be made subsidiary to defense demands which can be met by Emory.

AN INDEPENDENT and nonprofit foundation to encourage scientific research and investigations at the University of Washington is to be known as the Foundation for Research. All income will be used for scientific research, with special emphasis upon research and investigations which will aid in the development of the resources of the state. A board of eleven trustees has been selected to direct the activities of the alumni-sponsored corporation. The board is divided into three memberships: alumni, members-at-large, and University members.

THE periodical service of the United States Office of Education to schools and libraries has gone on a new war-

time schedule. *Education for Victory*, published on the first and fifteenth of each month, replaces *School Life*, as journal of the Office for the duration of the war. Returning to its original 1918 wartime schedule, this periodical will cover at once more than a score of wartime programs already assigned to the staff of the Office of Education.

A MINIATURE Institute of Public Opinion has been organized at Cornell University to study the impact of the war on student psychology and to find a basis for building morale within the democratic framework of the campus. It will function for the duration of the war. The venture will involve three distinct steps: systematic polling of student opinion, testing of attitudes in groups, and more intensive case studies of individual points of view. It is hoped in this way to reach some conclusions on the strength of appeals of shifting war aims and policies among men and women of college age.

AS ITS contribution to the strengthening of inter-American cultural relations, the University of Cincinnati has announced sixteen scholarships created expressly for South and Central American students. Six are in the College of Liberal Arts, and the remaining ten in the College of Engineering and Commerce where recipients will study under the Cincinnati plan of co-operative technological education originated by this University in 1906. Through the co-operative plan, these Latin-American students will learn industrial methods in some of the local key defense plants, particularly in machine-tool production, for which the Cincinnati area is a center.

A RECENTLY created War Board of the University succeeds the University of Michigan Committee on National Defense. As approved by the regents, the Board is to handle all correspondence in regard to the war, maintain an information clearinghouse on all matters pertaining thereto, and, in consultation with the administrative officers and faculties of the several schools and colleges, formulate plans for the adjustment of the operations of the University to war demands. The recommendations of the University War Board will be transmitted to the University Council, the Conference of Deans, the schools and colleges or other units as may be appropriate, and to the board of regents.

THE revised instructional program of Indiana University will permit students to graduate in two and two-thirds years, inaugurates three regular semesters a year, provides for six-day class weeks, creates a junior division in which education will be adapted to the needs of the individual, eliminates or shortens traditional vacations, includes year-round military training, initiates compulsory physical and mental-fitness training for undergraduate students, introduces military-service preparatory courses, and in the interest of economy consolidates class sections and abolishes less important courses.

All Freshmen hereafter will be admitted to the junior division in

which courses of study will be adjusted to their needs and to the time which they can attend school. While enrolled in the junior division, they can make up deficiencies and decide the future program they wish to pursue.

Gone with the old calendar plan are June commencements, the summer sessions which have been held for fifty-two years, and most vacations except at Christmas and a brief period in August. Two commencements will be held this year, the first for present Seniors on Sunday, May 10, and the second for present Juniors late in December. Due to the war emergency, special provisions are made for students entering military service and for admission of high-school Seniors and graduates.

DURING the past two years New Mexico Highlands University has added several structures to the new complement of facilities begun a few years ago. Alongside a library and administration building completed in 1936, there are now in various stages of completion a dormitory to house 110 girls, a dining hall and student lounge, a stone stadium built by youths under *NYA*, and a new machine shop. In the latter, boys are working with $60,000 worth of modern machine tools not commonly seen in New Mexico.

BECAUSE of the pressing need for specialists in dental reconstruction and rehabilitation, New York University College of Dentistry has completed a comprehensive program of graduate training for clinical teachers and research scientists. After twelve years of experiment the "New York University Plan" is established in preclinical science departments which are as strong as those in the modern medical school and in which dentistry can train its own specialists as teachers or investigators.

SIMULTANEOUSLY with the recent statement issued by Harvard University regarding the reorganization of educational plans to meet war needs, and the voluntary action of the faculty in committing themselves to a twelve-months' basis in view of impending deficits, it was also announced that President and Mrs. Conant will move on July 1 from the President's House to the smaller house at 11 Quincy Street, which was for many years the home of the late Professor George Herbert Palmer. This is part of a general program to reduce administrative expenses. Furthermore, at the urgent request of President Conant, the Corporation has agreed to a substantial reduction in the salary of the president of the University, to become effective July 1, 1942, and continue throughout the war.

ACTIVITIES and services of the United States Office of Education during the past year are reviewed by Commissioner Studebaker in his annual report submitted to Paul V. McNutt, the Federal Security Administrator. The report tells of the voluntary leadership exercised by the United States Office of Education and of its cooperation with state and local school systems in the organization of Amer-

ican education for national defense. The official duties of the staff of the Office of Education are recorded, and the trends in organized education during a period of national emergency are evident.

To accommodate the three hundred students who were turned away from a winter course in laboratory technology, the Department of Bacteriology of the University of Washington will offer the course during the summer quarter. The course, which was offered for the first time, was designed to enable students to prepare for Army and Navy work as well as for emergency routine hospital and clinical positions. Only twenty persons could be accommodated during the quarter, although approximately three hundred applied.

An information center, to which students and citizens may turn for information about the war, has been established by the University of Kentucky. Material, printed and otherwise, relating to the war effort of the United States, will be correlated by a committee and made available to any citizen wishing information. University defense councils—one for men and one for women—have also been established on the campus in order to assist the students to direct their efforts into the channels in which they will be of most help to the Government.

An integrated two-hour course cutting across the departments of economics, history and government, sociology, geography, psychology, and philosophy is being offered at Denison University this semester. The course is an outgrowth of a series of conferences in which Antioch and Kenyon Colleges joined Denison students and faculty to consider the merits of such a plan. The course will culminate in a peace institute May 21–22 when students, presenting papers they have prepared in the course, will share the two-day program with national speakers of prominence.

In an affiliation whereby qualified graduates will receive a university degree, the New York Hospital School of Nursing has become part of Cornell University. Together with the New York Hospital and Cornell University Medical College, the School of Nursing is an important unit in the medical center at Sixty-Eighth Street and York Avenue, New York City. It will be known as the "Cornell University–New York Hospital School of Nursing."

The City College Civilian Defense Council has organized a Public Information Poll to "ascertain by monthly house-to-house interviewing what is on people's minds in connection with our war effort." The poll is using more than one hundred student volunteers as field investigators. During February, in order to work out the mechanics of the poll, students visited more than four hundred homes throughout the city. The findings have been studied and made available to civilian-defense authorities. The results are expected to be particularly useful in helping officers of broadcasting stations, governmental agencies, and defense units to increase the

effectiveness of their present methods of disseminating information.

THE war may bring a measure of coeducation to Rockford College, one of the oldest liberal-arts colleges for women in the country, if present plans for a pre-engineering course to be given on the campus next fall materialize. In collaboration with the Illinois Institute of Technology and local industrial organizations, Rockford is to offer engineering courses on the freshmen and sophomore level, as part of the effort to increase the nation's supply of trained engineers. Men taking part in this engineering program would complete their training for their degree at the Illinois Institute of Technology after taking approximately two years of classwork on the Rockford campus.

THE Board of Trustees of Cornell University has set up a fund of $200,000 for the year 1942–43 for emergency use in helping students who desire to take the accelerated program but lack the money to support themselves during the required summer terms.

THE growing number of Dartmouth students turning to handicrafts in their spare time is thought to have some direct relation to the war and its accompanying mental conflict, according to a recent report covering the Student Workshop. The first year of its extra-curricular experiment "to teach men to use their hands as well as their heads," however, has been so successful that the war situation must be regarded as only an incidental cause. About six hundred students, or more than one-fourth of the undergraduate enrollment, have had recourse to the workshop, with 225 regular participants. The shop has been forced to expand its quarters. The assortment of power tools and materials has been made increasingly complete by the College, which has been willing to provide a well-equipped shop simply because so many of its men are interested in making voluntary use of it.

BEARING out a claim that the whole state of Wisconsin is its campus and that its services are available over all the state, the University of Wisconsin lists an offering of over four hundred courses and cites an extension and correspondence enrollment of 18,986 individuals during the past year. Ten members of the field staff travel nearly two hundred and fifty thousand miles a year in arranging for University services in the state. Classes for freshmen and sophomore credit, taught by itinerant members of the faculty, are conducted in 18 cities outside Milwaukee, while Milwaukee itself is served by the Extension Division at a six-story downtown building where the first two years of the degree course in letters and science and in engineering are offered. Classes have been organized for teachers in service who desire University credit. The Division has developed an expanding service of visual instruction during past years. Last year over eighteen thousand reels of educational pictures sent over the state were seen by more than one million two hundred fifty thousand persons.

·Editorial·Comments·

The ABC Degree

THE Pearl Harbor on the collegiate front is the new ruling of the University of Chicago regarding the A.B. degree. Not that the action of Chicago is hostile; it disturbs the college people who think it is a menace to collegiate education. Our readers know that the Senate of the University of Chicago, by a 63 to 48 vote, has recently decided to confer a Bachelor's degree upon students at the end of two years of college work.

The college associations, vigorously censuring the action, see it as a break with tradition. The spokesmen for the University maintain that it is a return to an old tradition when the degree indicated the completion of a program of general education which was finished much more speedily than in these more efficient times.

The action of the University was influenced by three arguments. Its spokesmen present the fact that the University already has a four-year program in general education in operation. Its distinctiveness lies in the fact that the program begins at the end of the tenth rather than the twelfth grade as in other colleges. What Chicago is doing, its spokesmen say, is merely to advance the date of admission to a four-year program. This they maintain is defensible on educational grounds. That argument, however, does not satisfy the colleges which (like Chicago itself) admit most of their students at the end of the twelfth grade. By the colleges the best that can be seen is a two-year course for the Bachelor's degree after their students matriculate.

More important for Chicago is the local argument that the control of general education in the University is shifted by the new plan. In the present program the requirements for general education are controlled by the departments which are primarily interested in their specialities and only mildly interested in general education. Under the new plan, the division of general education will be able to set up its own and presumably better requirements.

The Chicago spokesmen also point to improvements in instruction that will accrue to the students when the new plan gets under way. These will benefit many areas of professional training. Specifically, at present a prospective librarian takes a four-year college course and to this adds a single year of professional training. Under the new plan the course in librarianship may be three years in length, and its parts be so arranged as to secure a maximum of maturing professional experience for the student. For a variety of occupations now requiring what is in effect a Master's degree, this break at the end of the second year, with its three-year sequence to follow, will be an improvement over present conditions.

It is, therefore, logical for the

University of Chicago to take action to emphasize the sophomore-junior break. The shift has been recognized on paper for fifty years since the early days of the Harper régime. For forty years the degree of Associate in Arts has been given in passing toward the Bachelor's degree. Whenever a Sophomore has wished to assemble his credits and pay the necessary fees he could obtain the degree.

During the last decade, however, the University has been acting on the assumption that these two years have an entity of their own that springs from the concept of general education rather than as formerly from the idea that they are preparatory to a longer program.

To make the break dramatic the University has decided to confer the Bachelor's degree at the end of the four-year course which is the end of the sophomore year in other colleges.

Up to this point we go along with Chicago because they have a good local case for a break. But here we raise the question, Why pick on the Bachelor's degree as the label? The colleges say that it has been purloined. The Chicago spokesmen say that the Bachelor's degree stands in the tradition for the completion of general education. Our expert friends in the history of education do not fully subscribe to the assertation that originally such was its meaning. It may have been so but the mind of our faculty populace does not spontaneously catch the idea.

As a matter of current history, in the making now for fifty years, the Bachelor's degree is a professional degree. It is not the symbol of the completion of general education. Obviously, the Bachelor of Science degree qualifies students immediately to enter the professions of teaching, commerce, journalism, nursing, and a score of others. Not so clear but equally true, the Bachelor of Arts degree stands for professional specialization by way of the current pattern of proficiency in a major field. Bachelors of Arts enter laboratories as technicians in physics, chemistry, bacteriology; they enter business with more than the rudiments of economics and business organization; and they swarm into the graduate schools which will not accept them as full apprentices in their ultimate occupation unless they have learned the simpler skills of the profession in their bachelor program.

Some professors grow apoplectic when the charge is made that the arts college is a professional school. But an examination of the catalogues of a hundred colleges makes the claim apparent. If further evidence is needed, it is secured by listening to the representatives of colleges as they answer the question of prospective students about what the college can do for them in making a living.

Our criticism of the Chicago plan is that the University is picking a professional degree as a symbol of the completion of general education. Its earlier choice of the A.A. degree has not proved popular, but its faculty is inventive and can select a new title which will be "nearer to the heart's desire."

Partly with a desire to be helpful

[*Continued on page 286*]

··Reviews··

Purchasing Agent at Harvard

PARDON MY HARVARD ACCENT, *by William G. Morse.* New York: Farrar and Rinehart, 1941. (no beginning pages) 364 pp. $3.00.

This book is the biography to date of William G. Morse, a good American citizen. A college graduate (Harvard, it seems), he was one of the earliest auto salesmen, a steel-mill laborer and foreman, a textile-mill superintendent and partner, a grain-mill operator, a naval officer on active destroyer service in World War I, and a hay and feed dealer. And then, in 1923, the Lord passed an unsolicited and happy miracle by which he became the pioneering purchasing agent for Harvard's numberless needs—long before most of the Harvard community believed the institution needed a purchasing agent. It is in this last-named capacity that he most intrigues the reviewer. This is not to say that the whole book does not pulse with human interest.

The thing that most impresses the reviewer—and it must be so with other members of the university business-officer craft—is the tact, resourcefulness, and vigor of Mr. Morse in the development of his service bureau for Harvard. The impressiveness of these, his qualities, is not lessened by the fact that most of us had cruised the same uncharted sea and arrived in a calm port before Morse and Harvard ever set sail. His book has no allusion to these pre-Harvard voyages. It was just as new to Harvard as, ten or fifteen years before, it had been to us of the state universities of the Midwest.

There is just one item in the book that I now recall indicating that Mr. Morse has ever been west of Buffalo: he speaks of an inspection with approval of steel shelving in the Museum of the University of Michigan. If he drove west on this occasion he must after due thought have chosen the U. S. route that runs "by way of Dedham." He admits that teaching today is not always good "even at Harvard." He speaks of the Harvard band, "the best college band in the country"; of the best hospital in the country, the Massachusetts General Hospital. As a student his fraternity chapter was criticized by its national officers because of lack of hospitality to migrants. "If you visited any of the midwestern chapter houses you would be made welcome there." The Harvard boys "knew this and felt guilty," but after all "we didn't particularly want to go west" (page 293).

But none of us who have developed College purchasing departments and made them work as service bureaus can read this book without feeling that Mr. Morse has written our own biography as we wish we might have lived our official lives. Few if any of us have done so well. And so, Mr. Morse, we most gladly and wholly pardon your Harvard accent; and we thank you for "having done it" and for "having written it down."

SHIRLEY W. SMITH
University of Michigan

Balanced Discussion

PERSONALITY AND LIFE, *by Louis P. Thorpe and Jay N. Holliday.* New York: Longmans, Green and Company, 1941. xiii+266 pp. $2.50.

The principal characteristic of this book on the psychology of personal development is balance. The author attempts to bring the findings of all the schools of psychology, psychiatry, pedagogy, and philosophy to bear on the process of personality formation and improvement. The more orthodox members of the various schools will consequently feel that the

author is confused or undiscriminating. From the point of view of the general reader and counselor, however, this feature of the book is rather helpful. Minds that would be antagonized by undiluted behaviorism or Freudianism may hereby be brought into some helpful use of the insights and methods of these varying practitioners.

This characteristic of the work suggests its chief uses. As a reference work in courses in the psychology of personality it will have wide value because of the calm and clear statement of many important principles. Counselors will find that sections of it may be helpfully "prescribed" for their more inquiring and intelligent clients. The general reader in this field will find the whole book a helpful orientation to the entire matter of personal relationships. Even the careful theorizer will find the book stimulating because with unusual clarity and perspective the author has attempted an ambitious synthesis. Although it is obviously too early for such a theoretical unification to be successful, yet such failures are a necessary preliminary to any future successes. Such a balanced attempt as this one will help in formulating further researches.

Various simple or mystical conceptions of personality are abandoned by the writer for the view that personality is "an elaborate pattern or combination of all of a person's characteristics" (pages 4–5). Human nature "at its source is a matter of ceaseless effort to satisfy inner stresses set up by man's basic needs" (page 8). These basic needs are "satisfying the stresses set up by hunger, thirst, excessive heat or cold, physical pain, fatigue, and the like," . . . "the need for personal recognition, self-expression, . . . and of being regarded as an individual of worth," and "the need to nurture and care for other members of society by offering them recognition, sympathy, and generous service" (page 9). All behavior is viewed as the effort to satisfy these drives. Much ill-health, unhappiness, and misconduct is the result of unsuccessful or ill-proportioned effort.

Although intelligence has important instrumental functions and moral codes are helpful, emotional maturity is viewed as the chief and basic determiner of adjustment, happiness, and social usefulness. This emotional maturity, while not defined, seems to be the same as emotional stability and social usefulness of response.

The author then describes such responses in greater illustrative detail and points out the danger of "psychological drugs" or compensating reactions. Introversion and extroversion are compared and greater adaptive value is seen in a slight predominance of extrovertive tendencies.

Methods of developing a "good" or socially useful personality are presented in clear and practical terms. And the "patching of broken personalities" brings psychiatric and analytic techniques to bear on the problems of "nervous" persons.

The final chapters well illustrate the comprehensiveness of the author's viewpoints, dealing with philosophies of life—pragmatism and religion—as they bear on personal integration. Even the effect of idealogical societies and planned economies are discussed from the point of view of mental hygiene. The psychological foundations of social planning and the psychologist's remedy for present world unrest constitute the final chapter.

The book will often be mentioned, both in commendation and criticism. Its value as an attempt at needed and inevitable synthesis will be genuine and considerable.

F. F. Bradshaw,
University of North Carolina

Highly Persuasive

An Adventure in Education, *by the Swarthmore College Faculty under Frank Aydelotte.* New York: Macmillan Company, 1941. xii+236 pp. $2.50.

This book has the rare merit of conveying the contagion of a verve and zest which are rarely met in more formal educational treatises. Indeed, it is an antidote to a deal of the defeatism and bewilderment about current college attain-

ments. In a democratic society it is less important that every educational experiment necessarily commend itself to every commentator, than that such experiments shall be described and appraised with some objectivity and some heartening awareness of their genuine value.

The adventure which this book describes has proceeded out of the soil of the familiar liberal-arts cultural tradition, with an obvious injection of Oxford influence due to President Aydelotte's own background. It is not unfair to say that the novelties are less those derived from the fundamental premises of such education, than they are concerned with one method of their working. The emphasis, of course, is upon the honors system as the central educational device. A review of this book is not the proper place in which to raise fundamental questions about the adequacy of these fundamental premises, but one cannot omit reference to the fact that the conception of modern culture which underlies this adventure is assumed rather than examined. And this may well limit the basic value of the total appraisal. Within the premises employed, however, it should be said at once that this book is deserving of warm commendation and of an attentive reception at the hands of everyone interested in improving the quality and tone of higher education.

The description is balanced, and as objective as one could expect of teachers so close to the process; nor does it ignore the criticisms which have familiarly been made. Indeed, it attempts to meet them with discrimination and judgment. One who has seen at close range the budgetary problems of college education today does realize, however, that the problem of expense is crucial here, and that a generalizing of this adventure would entail a skill in money raising, both from private sources and from taxpayers, which it leaves one a little appalled to contemplate. This is a comment upon the adventure, rather than a serious criticism, for it would indeed be a dispirited and discouraged educator who would deny about the college process that what is worth doing at all is worth doing well.

A more relevant observation has to do with a question that may reasonably be raised as to the place of what are loosely designated "the arts" in the liberal-arts college. Certainly the danger of being too intellectualistic, and of making college too much an experience in the manipulation of words, is a danger that we are now fully aware of. And two quotations from the book can indicate how the problem of supplementing such verbalistic emphasis is viewed and defined in terms of the Swarthmore course offerings. For purposes of information rather than judgment, the two following excerpts may be given as reflecting the Swarthmore position:

> Extrinsic rewards should not be necessary for all of the various intellectual and cultural activities included within the total program of college life. It should not be necessary for the college to offer credit hours toward graduation for debating, musical appreciation, dramatics, art work, athletics, or any of the other "extras" of education. Thus, by suitable discrimination among the various intellectual activities do they acquire a status and dignity which makes intellectual achievement an end in itself (page 71).
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> . . . . . .
>
> Furthermore there is the value in this procedure of allowing maximum room for spontaneity in the arts and crafts activities. A picture, a story, a poem, or a musical composition which is produced as an assignment and rewarded with a grade or credit toward a degree would seem to lack the chief values of the truly creative experience. Neither can proficiency in the creative arts be examined at the conclusion of the college course in such a way that it provides a measure of the emotional development of the individual concerned. The extra-curricular status for creative work seems as desirable as the amateur status for athletics, or a free and spontaneous program for social activities (page 177).

Distinction between liberal arts and creative arts may have pedagogical validity, but there is, as the authors say, "room

for varying emphasis upon one or the other." And it probably has further been true, as they say, that "colleges which develop their curricula around the creative arts tend to slight the historical and theoretical branches of learning. Equal emphasis on the two tends to confusion of aim and conflict of method" (page 176). Yet one cannot help wondering whether confusion of aim and conflict of method are inevitable. May it not rather be true that the secret of their consolidation has thus far eluded us? It is frequently said that the best of the methods of so-called progressive education are most actively in use at the bottom of the educational ladder, and hardly at all at the top. May it not be true that the liberal-arts college faces a criticism of its limitations on this particular count, and may it not further be true that colleges which will work on this unification of aim—that is, as between liberal and creative objectives—have a highly significant experimental and exploratory rôle to play in the immediate future? In short, and bluntly, is the demarcation between these two ways of approaching education as sharp and psychologically valid as some have assumed? These questions are deliberately rhetorical; but they do arise even from a sympathetic reading of this volume.

Experiments in education at the college level are to be welcomed and encouraged, but one would like to hope that more could presently be done with experiments which would try to take account of elements of successful novelty in a number of such experiments. Should it be necessary to choose the pattern, for example, of Swarthmore as against the pattern of Bennington or St. John's or Antioch or Chicago? Why is not the time at hand when some synthesis of objectives and procedures, out of a number of pedagogical elements, can be combined in a way that will give the college a vibrancy, a historical foundation, and a contemporary verve which will represent something better than we seem yet to know at all?

This book invites this kind of reflection. It is, up to a point, highly persuasive about the success of its own procedures. But that very persuasiveness prods the mind to examine the state of experimentation at the college level and to suggest that such experiences as this one should not be approached by educators in the spirit of "either—or."

In brief, this book does exceptionally well that which it sets out to do.

ORDWAY TEAD
Columbia University

The ABC Degree

[*Continued from page 282*]

and partly for other reasons, we propose the ABC degree—*Baccalaureus* in *Artibus Chicagensis*—if the University must cling to the bachelor base. This would help to ease the perturbation of the colleges by implying that it is a more elementary degree than the conventional A.B. and at the same time indicate its origin in Chicago. Or an English precedent might be followed as: John Doe, M.A. (Oxon.). Then we would have Richard Roe, A.B. (Chic.). There are many interesting possibilities.

W. W. C.

In the Lay Magazines

"Will the American College Survive?" by Frederick P. Keppel, *American Scholar*, Spring, 1942.

Mr. Keppel, former president of the Carnegie Corporation, discusses some problems of survival and their possible solutions in the independent, "old-fashioned" college. Potential college population is now decreasing instead of rising; population and colleges tend to concentrate in cities instead of spreading over wider areas; student fees no longer cover costs and salaries once supposed stabilized at a low level. Two-year junior colleges and tax-supported state schools attract students, as do vocational institutions. Religious denominations do not support their special colleges as they once did and large gifts from individuals are less common except to the "prestige" institutions.

As a result of these changes and of the immediate war situation, competition for students and money is often great. Possible Government or foundation aids are limited. During the depression many colleges had lowered standards for admission, promotion, and retention of students. Inadequate vocational courses were "put on sale"; scholarships and athletics were used for questionable purposes. "When the new crisis came in 1940, not a few colleges found themselves already mortgaged up to the hilt, morally as well as financially." Such "mortgaged" institutions may present an unfavorable environment for the character-building which is one of the functions of the college.

Some institutions had been fortunate enough to solve their building and equipment problems before this critical period. "Prestige" colleges and those with high reputations of preparation of students will likely meet fewer difficulties. Campaigns for funds, raising of fees, risking of endowment to increase income are not successful in many cases. Industry will aid technical schools and there will be some aid from foundations, but the foundations do not have enough capital to do what is needed.

Colleges in distress may reduce costs by becoming junior colleges offering the less expensive courses; they may merge with others; they may use some sort of group co-operative plan; or they may "simplify their community life." They can cease attempts "to keep up with the academic Joneses," they can use plant and personnel twelve months of the year and for community adult-education programs. Faculty members may be lent to Government

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or industry. The proportion of women students, if limited, may be raised. In some cases it may be wise to spend capital or even to borrow money.

"Significant and Timely Statements by Leading Educators of America: Present Day Conditions Require Us to Be Aware of Art Needs Now," *Design*, February, 1942.

Six men and women prominent in art education write upon the rôle of art and of art teachers in wartime and in democracy. Others might well take these rather concise statements as suggestions for thinking of the actual and potential contributions of their own subject areas in terms of our war and postwar problems.

Art, Miss Virginia Murphy writes, is needed "to sustain youth against the present impact of mechanistic regimentation and to insure to the future years a well-balanced generation prepared to share in the building of a democratic world and equipped to live happily and to work effectively in it." Art has "educational priorities for constructive living."

Artists, teachers, and students may contribute posters and aid in publicity for local and national organizations, but relief of tension and raising of morale are important wartime functions. English museums and art classes have been re-opened. They are more popular than ever before. In preventing and curing "jitters" and in raising morale, art has values recognizable even in a time when school budgets are being trimmed. Skilled defense workers build morale and recreation through art channels. More can be done for them and for children.

The final statement, by Mr. Robert Stose Hilpert, centers upon what several of the others have mentioned: art and democracy. Both recognize and encourage individual, creative work; both reject conformity, submission, and barriers of class or race. Both are for actual living beings and their needs. "Art for all" has replaced the "ivory tower" concept.

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